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Crude Oil Situation Basically Sound

Average daily production in United States week ended April 19, 1,944,995 bbls.

Conditions Greatly Improved as Compared to Last Year. Status of Gasoline Market the Only Deterrent Factor

Gain in daily production in United States week ended April 19, 11,788 bbls.

By Andrew M. Rowley

The crude petroleum situation for the entire United States is basically sound. Production so far this year has failed to show any increase, being practically the same as it was for the first week of the year. There is nothing in sight now to indicate there will be any material increase or decrease in the output of crude. In other words, production may be regarded as stationary at this time with the probability it will remain so for some time to come. Consumption at this time, despite the fact weather conditions in February and March were probably the worst experienced by the oil industry in several years, is slightly greater than production. The country is just beginning to enter into the period of maximum consumption of petroleum and its products. This will widen greatly the margin between production and consumption which already exists.

There is no menace of California such as obtained at this time last year. The output of California is declining now while this time a year ago it was increasing rapidly. There are more automobiles registered now than ever before in the history of the industry. Consumption is greater than it ever was at this time of the year, even in the face of the inclement weather. And, of great importance from a psychological standpoint at least, is the improved outlook in the business and political situation. The political outlook is clearing. The apparent selection of the Republican nominee removes much uncertainty from the "election year" agitation. There is little doubt but that a tax bill will be enacted within the near future. That will permit business to adjust itself accordingly. The reparations question which has been the big factor in preventing Europe from resuming normal business conditions seems in a fair way to be settled finally. That means much to American business and American business means much to the entire oil industry.

The One Deterrent Factor

The one feature of the entire crude petroleum situation which is causing some concern, in certain areas of the country at least, is the weakness of the gasoline market. Refiners throughout the country in January of this year redoubled their efforts to obtain crude oil when the overproduction situation cleared and the outlook seemed to assure a great increase in consumption. This crude was refined and stocks of gasoline and other refined oil products piled up in vast quantities. The inclement weather so far this year resulted in a demand less than had been expected. Consumption was greater than it was a year ago but the increase was not so great, as far as refined oils were concerned, as had been anticipated. As a result there is considerable gasoline in storage and refiners for some time have not been buying crude as they did earlier in the year. It will require probably two months of good motoring weather to relieve the gasoline situation. In the meantime, there might be a reappearance of distress gasoline on the market which may, as was the case last year, be responsible for a reduction in tank wagon prices for the product.

What effect a reduction in the tank wagon price of gasoline would have on crude oil prices is somewhat problematical. If the refiners do not buy crude and the large purchasing companies are forced to put considerable oil in storage, the crude oil situation would be weakened. On the other hand, the production of crude petroleum throughout the United States, plus the imports, even at this time, are less than the consumption plus the exports. The difference now amounts to probably 10,000 barrels a day and it is almost certain this margin will be increased from this time throughout the summer.

Consumption Really Just Starting

Consumption of domestic and imported crude petroleum showed an increase of more than 15 per cent in January and February of this year as compared to those months last year. The season of maximum consumption has barely opened. Cold weather was experienced in many areas even last week. When hot weather throughout the entire country really arrives, a change may be expected in the gasoline situation, for consumption is certain to show a great increase.

PRODUCTION IN THE UNITED STATES

Estimated daily average production in the oil fields of the United States for the week ended April 19, and a comparison with previous week follows:

Fields	April 19	April 12
Oklahoma—Northern Fields:		
Tonkawa	36,114	35,700
Burbank	107,846	111,685
Other Osage Fields	40,050	39,850
Cushing and Shamrock	23,980	23,955
Bristow and Eastern Bristow	52,130	53,560
Northern Miscellaneous	107,125	104,975
Southern Fields.		
Healdton	16,890	16,700
Hewitt	19,960	20,350
Southern Miscellaneous	35,950	34,825
Total Oklahoma	440,045	441,600
Northern Louisiana	46,680	42,865
Arkansas—		
El Dorado and Calion	12,700	13,230
Smackover Light	33,900	30,530
Smackover Heavy	89,700	76,815
Stephens	4,650	4,450
Total Arkansas	140,950	125,025
North Central Texas	120,950	119,010
East Central Texas, (Mexia, Currie, Corsicana, Powell)	148,810	157,010
Kansas	70,700	69,750
Total Mid-Continent Area	968,135	955,260
Gulf Coast and Southwest Texas	109,635	110,607
Eastern	101,150	99,950
Wyoming-Montana	135,075	125,390
California—		
Santa Fe Springs	74,000	80,000
Long Beach	177,000	183,000
Huntington Beach	53,000	53,000
Torrance	55,000	57,000
Remainder of State	272,000	269,000
Total California	631,000	642.000
Total United States	1,944,995	1,933,207

Increase, 11,788 Barrels.

The crude oil situation in itself is good. It is really better than production figures, as a total, really show. In other words, while production as a whole has remained fairly stationary during this year, the production of light oil or the crude from which the greatest amount of gasoline is made, has declined greatly. Take California for example. The total production of that State has shown a decline of 55,300 barrels a day from the first week of this year to this week. In that same time, the output of the three big fields in the Los Angeles Basin, which caused the trouble last year, and which produce high grade oil, has decreased 148,000 barrels. The output of the older fields of the State, many of which produce a low grade oil from which little or no gasoline can be recovered, increased 72,700 barrels a day since the first of the year.

Oklahoma has shown an increase in production thus far this year of 73,315 barrels a day, less than half the decline in output of high grade oil in California. The Wyoming-Montana area also has decreased about 25,000 barrels a day and most of this is of a good grade oil. Take last week for example. The increase in production of Smackover crude of the heavy grade was about 13,000 barrels a day. That oil contains little or no gasoline. Hence, the production of crude from which gasoline is made really showed a decline last week.

Entirely Different From Last Year

Production in California from January to and including April of last year increased 150,080 barrels a day, practically all of this being oil of high gravity. In addition, production there was mounting rapidly all the time until in September of last year it average 327,865 barrels a day more than it had in January of the same year. Most of this, in fact, practically all of it was high gravity oil which was used in the making of gasoline. This year, as stated above, the output of California light oil has dropped 148,000 barrels a day so far and is still declining. The output of the entire State had decreased 55,300 barrels a day so far this year. In addition, last year many wells in California were pinched in while certain fields were practically shut in entirely. Now everything is opened to its capacity.

Oklahoma reached a maximum daily production last year of 527,000 barrels. It cannot be expected to produce that much this year, even with the great amount of new work being done. There is no Powell Field in sight now to break in on the situation as was the case last June. Powell attained a maximum production of 354,000 barrels a day last November. That field now is producing around 115,000 barrels. Powell crude was high gravity, too. The estimated daily average production for the United States the middle of last July was 2,320,000 barrels a day. The average so far this year is about 385,000 barrels a day below that. There is nothing in sight to indicate this average will be increased.

Harking back to a matter which has been pointed out in these columns before, if the big oil companies did not believe the future of the crude oil situation bright and that there will be a great need for new production in the comparatively near future, would these companies and individuals have paid $14,000,000 for the privilege of drilling on Indian land in the Burbank area of Oklahoma and would they now be spending additional millions in drilling these tracts?

Musings of a Motorist---Article No. 2

Some Observations Any Auto Owner Might Recall While Waiting for Gas at the Filling Station

Wasn't I lucky that this filling station was here just when I ran out of gasoline? You've got to hand it to the oil industry for this service along every highway and byway and every nook and corner of the country.

We all knock the oil business. It's just a habit formed in childhood to repeat what some other fellow has thought that it's a get-rich-quick game. I'll tell the world that there's another big serious side to the story.

My wife who pays the milk bills, and checks up on groceries, tells me that gasoline is cheap today, compared to clothing, sugar, meat, flour, potatoes, eggs, rents. She has traced the costs back 13 years and gives the oil industry a clean bill of health. Besides, it's worth something to the wife and girls to drive up and get the tank filled, with free air and water service thrown in. Occasionally they stick on a new tire and fix the carburetor without extra charge.

When you hear the gurgle of gasoline as it flows into your tank, recall the million men employed by the industry to make possible this filling station service. They include the leasemen, the producer, drilling crews, pipe line owners and operators, refiners battling in a scientific way to extract all that can be refined from crude to keep apace with the 15,000,000 licensed cars. The Government says that of the 286,569 oil wells in the United States, that 236,181 pump less than one barrel per day. Why, I use a barrel of crude oil every time I fill my 10-gallon tank.

Barrel for Each Tank

Why kick about gasoline prices when we know that wells costing $3,500 to drill a few years ago now cost $20,000 up. If the oil industry was as bad as politicians paint it why didn't the leaders of the industry take advantage of the situation during the war? Who ever heard it charged that the oil industry profiteered or sacrificed patriotism at a time when the world was at the mercy of the American oil men? Can't we recall that the British, suffering from an oil famine, when gasoline and lubricants meant defeat or victory, came to the American oil man, laid cards face up on the table and asked for supplies at any price?

Disdained to Profiteer

We ought to know, because it's history that the American oil industry delivered the goods at a cost so low that the world regards the incident as one of the great patriotic acts in the fight for Democracy.

The Eternal Search

If the oil industry was not deeply concerned and appreciated its great responsibility as the source of supply for gasoline and oils, the price of gasoline today would be prohibitive. Supply and demand regulates prices. If the oil man would lose interest in the eternal search for new fields, consumption would overtake production within a month and the prices would soar so high that the entire automobile industry would meet wth disaster.

If you do not appreciate this vast service, try and realize that 1,207,000,000 barrels of oil had to be found at a cost of $3,460,000,000 to take care of the automobile development since 1913? Searching for that oil how many failed? How many companies and individuals went broke? Judge for yourself because in 1923 50 per cent of wells drilled on leases where there had been no previous development were dry.

The public has heard something about the 2,400 oil wells drilled in these new fields. BUT NOTHING IS EVER SAID FOR THE MEN WHO SQUANDERED FORTUNES ON THE 2,380 UNPROFITABLE HOLES SUNK THROUGHOUT THE COUNTRY.

Gasoline Least of Costs

I'm a methodical auto owner. I keep a budget and my annual expense account proves that the gasoline and oil used in the car is the cheapest part of the upkeep. Figure it out yourself. How much is your garage cost, depreciation, repair bills, tire costs, license, insurance? How does it compare with gasoline costs during the past few years? Think it over. You will doff your hat to gasoline.

Bargains at Public Expense

I've followed the gasoline plays by politicians. One claims that gasoline prices vary in different States. They never explain however that State taxes account for the differential. One Governor tried to sell gasoline. He opened up filling stations. He charged up no rent and no overhead, but when the public gets the bill in higher taxes, wages of State employes, all extra overhead will be absorbed. One Governor gave bargain prices in gasoline. On the other hand the State's expenses were increased. Who will pay the bill eventually?

If many of the critics of the oil industry were responsible for the supply of crude oil there would be a famine next month that would paralyze the commerce of the world.

Entitled to Appreciation

Oil men are conscientious and can be compared with any class of business. The average conservative business man has to "be shown." The oil men in July invested $14,000,000 for the privilege of drilling in the Burbank Field. They must get back over 7,000,000 barrels of oil before they can figure a profit.

The oil business is unlike any other business in the world. It is hazardous, from the spudding in of a well to the delivery of gasoline at the filling station. Considering everything, the oil man is entitled to just a small part of America's sense of appreciation. The army in back of every automobile is entitled to credit. When you thnk you have just cause for complaint, why not give the industry opportunity to explain. A letter addressed to the American Petroleum Institute, New York, will bring you a convincing answer.

Effects of Sinclair Line From Wyoming

By L. M. Fanning

Completion of the Sinclair Pipe Line Co.'s trunk line from Wyoming to Kansas City puts Rocky Mountain crude in direct competition with Mid-Continent and eastern crude for the first time. Just what effect, economically, the opening up of this source of supply to middle western and eastern markets will have depends to a large extent on production of the Salt Creek Field, Teapot Dome and other Wyoming fields as well as upon possible development of commercial production in Colorado and Nebraska.

In any event the capacity of the line as now constructed is 40,000 bbls. a day, so that no more than that amount of crude can come by pipe line from the Rocky Mountain area in direct competition with Mid-Continent oil for the present. In opening up the line, the Sinclair Pipe Line Co. ran 35,000 bbls., but its present plans call for daily runs of about 28,000 bbls.

Stated in competitive terms, starting with the night of April 12, when the first oil sent through the line arrived at Freeman, Mo., approximately 28,000 bbls. of Wyoming crude daily supplanted an equivalent quantity of Mid-Continent crude which hitherto had found an outlet. While this is not a big factor, with the Mid-Continent producing 960,000 bbls. a day, it means an addition to Mid-Continent storage oil assuming that the Sinclair Crude Oil Purchasing Co. continued its purchases without regard to Wyoming oil receipts of something like 840,000 bbls. a month.

Actually it is understood that the purchasing company is storing practically the equivalent of the 28,000 bbls. daily but that it will reduce its purchases in the Mid-Continent in line with a policy to make receipts balance with deliveries. In other words, purchases will be curtailed so that no additional oil will be going into Mid-Continent storage in consequence of the 28,000 bbls. coming from the Rocky Mountain Field. However stated, the latter oil is actually supplanting an equivalent quantity of Mid-Continent crude.

In the present finely balanced market, the sudden addition of 28,000 bbls. daily and the possibility of 40,000 bbls. daily is a factor of some importance. But, practically, the market significance of the opening of the Sinclair line is largely related to the Rocky Mountain territory and not to the Mid-Continent. The line is a notable historical achievement in the industry, fraught with great future possibilities.

Link With the East

The linking up of the Wyoming fields with the eastern markets by a 40,000-bbl. capacity line gives these fields a possible outlet for 34 per cent of their present production and establishes as an actuality a competitive price structure in the Rocky Mountain based on the Mid-Continent market.

Present production in the Rocky Mountain territory is running at about 125,000 bbls. a day. Refineries in that district are running about 75,000 bbls. a day of crude oil through their stills. The balance of about 50,000 bbls. a day has been going into pipe line and tank farm storage.

New refineries and additions to old refineries have been built in Wyoming and Montana recently so that actually there is a larger still capacity for crude oil than indicated by the runs. Some plants, it is understood, are having difficulty in securing sufficient crude oil supply, this in part being due to local transportation conditions. The general opinion is that with production in the Salt Creek Field declining, Rocky Mountain refineries will continue to take the large bulk of the production, leaving available for shipments east through the Sinclair Pipe Line Co.'s line only such oil as the Sin-

(Continued on Page 116)

Public Needs Immediate Information

Its Welfare, As Well As the Welfare of the Industry Demands Prompt Dissemination of Knowledge About the Oil Business

By L. M. Fanning

If what the petroleum industry believes of itself is true—that it is rendering an essential service as relates to the production, refining and distributing of oil—it has a definite moral obligation to inform the public of the facts concerning it. The basic fact is the public's own welfare wrapped up with the welfare of the industry. To say that this is not the time to launch any wide publicity campaign of defense of the industry against political attack is to disregard the public interest. One thing that the oil industry has been generally agreed upon is that the public knows nothing about petroleum problems. The time to tell the facts is now and always, regularly and systematically, in the logical course of developments. Politically inspired attacks, present or prospective, increase the industry's obligation to the public to tell the fundamental facts.

WHAT'S WHAT ON PUBLICITY

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Operation of the Teapot Dome naval oil reserve under the receivership of Admiral Joseph Strauss and A. E. Watts will continue pending final decision of the Government's suit for cancellation of the lease. Mr. Watts, while in New York following the rendering of the receiver's first memorandum to the court, said that by direction of the court the Mammoth Oil Co. continues to operate the property. The receivership is not a receivership for the Mammoth Oil Co. but for the Teapot Dome lease of the Mammoth Oil Co. solely.

A. E. WATTS ON TEAPOT DOME

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At present the Teapot Dome Field is producing about 3,000 barrels daily. This production is coming from 60 wells, the average production per well being about 60 barrels. There are four gas wells and five drilling wells and four wells have been found dry and were abandoned. All wells except one have been shot to increase production. All oil produced on the lease has been and still is run into vapor proof tanks where it is gauged by representatives of the United States Bureau of Mines for determination of royalty, assuring of a measurement when the quality of the oil is at its highest and the volume at its greatest. The receivers in their preliminary memorandum reported a difference of opinion in the matter of drilling offset wells and the completion of wells to the third Wall Creek sand and also in the matter of the curtailment of the existing production of oil and gas wells. This subject will be covered in a separate report to be made at an early date.

TEAPOT DOME PRODUCTION STATUS

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It is estimated that producing operations on the Teapot Dome reserve to date, investment in the pipe line from Salt Creek to Freeman, Mo., money spent for tankage and for royalty oil, have cost the Sinclair interests around $50,000,000. This represents an estimate of the entire cost of Sinclair operations in Wyoming.

$50,000,000 SPENT BY SINCLAIR INTERESTS

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Some criticism is heard in the oil industry that President Coolidge in appointing his Commission on Oil Reserves failed to name an outstanding representative of the petroleum industry on the commission. The question is raised as one of importance in a program to conserve oil supply in that the practical experience of a leading oil representative would be of value, and would be a logical way of rounding out a commission otherwise strong and non-political.

NO OIL MAN ON CONSERVATION COMMISSION

In his statement announcing the organization of the Commission on Oil Reserves and declaring its policy, Dr. George Otis Smith, chairman, says that whatever may be the outcome of litigation now pending, in the prosecution of which the several Government agencies are cooperating, the President's commission intends to base its immediate recommendations for administrative action upon the broad principle of preserving for the Navy as much as possible of the Navy's oil reserves until the Navy's need is most urgent. Many and difficult technical questions must be studied relating both to the Government's requirements and to the adequacy of present reserves. It is realized also that the oil problem of the future involves far more than the naval needs alone, the national defense includes provisions for war industries, sea-borne transport and army movements—all the activities, in fact, of a mobilized nation.

DR. SMITH'S STATEMENT

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The keynote of Dr. Smith's statement of policy is the retention of oil in underground storage. He says the present is a period of overproduction of oil, but an approaching shortage of American oil can be surely forecast, for consumption is rapidly increasing and already production has begun to drop from the high figures of last year. American wells, he asserts, cannot long continue to supply the bulk of the world's needs. Conservation measures are the part of wisdom; practices that will make for thrift in the use of oil may well be adopted by many industries and the general public, but the plan of reserving of oil for use in national defense even more insistently demands public approval. When the time comes that American industry and commerce are forced to depend in large part upon foreign oil, the American Navy, as well as other arms of national defense, should have its reserves of American oil to fall back upon, Dr. Smith states, adding that any other policy would endanger national security.

KEYNOTE IS BELOW GROUND OIL STORAGE

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The conservation policy outlined implies a radical step in the direction of operating old and new reserves, but notably of increasing acreage, on the part of the Government. The oil that now remains under Government control, or that can be brought under such control, must be treasured not for its market value, especially in these days of low prices, says Dr. Smith, but for its emergency value at some future date. The oil in the naval reserves is not to be used to supplement inadequate appropriations for current needs, but to be held for future needs. Obviously, se says, this policy, which simply reiterates the original purpose, cannot be carried into full execution except with the approval of Congress and by the appropriation of the needed funds. Considerable funds will be needed to provide adequate tankage for emergency needs, considerable more funds to purchase oil to fill these tanks, and still more funds to test and develop possible additional reserves, Dr. Smith says. Without money the existing reserves can neither be adequately protected nor fully utilized in fulfilment of their true purpose.

CONGRESSIONAL FUNDS FOR OIL

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The question is, how far will Congress go in providing funds for maintaining, setting up or proving oil reserves? In effect, the Government will have to go into the oil business in earnest and take its chance, as the industry does, on finding the oil. Stanley Frost in one of his articles in The Outlook on The Leaking Reserves makes an interesting comment on the Congressional attitude. Referring to the supposed "saddle" between the Salt Creek Field and the Teapot Dome Field and the possibility of a string of wells across the neck of the saddle so as to seal a portion of the Teapot Dome acreage against outside drainage, he says: "There is a political obstacle in this plan to seal the oil. It lies in the attitude of Congress. The cost would be somewhere around $1,000,000, which Congress would have to appropriate. In spite of all the noise it is making now, Congress has never been very favorable to the Navy reserves, and has done many of the things which make them so risky. Considering its previous attitude, its habit of delaying Government work when private owners fight the plans, its general slothfulness, and the fact that these wells would have been drilled not to recover oil but to flood themselves out as soon as possible—considering all these things, it seems unlikely that Congress would ever have given the money. Even if it had, it would have taken 18 months to get the appropriations made, a year to drill in the seal—if it worked. During all that time oil and gas would have been lost, and if the scheme failed at the end of that time the Navy or Interior would have been forced at last to try to make just such a lease as it did make, but under much less favorable conditions."

SLOTHFUL CONGRESS IN OIL BUSINESS

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Dr. George A. Burrell, secretary of the Petroleum Division of the American Chemical Society, calls attention to the work of Dr. Van H. Manning on plans for fundamental research work on petroleum problems, stating that his program will merit the best support of the division. He states it was brought out in a conference that of all the industries, coal tar, electrical, automobile, heavy chemicals, metals, vegetable oils and fats, cellulose, rubber, bread making, cement and petroleum, the latter ranks lowest on the list from the standpoint of its advancement due to chemical research. "This statement does not detract from some splendid research work now going on in the petroleum industry," Dr. Burrell says, "but the amount of work is relatively small. Consider the proglem: 'Fundamental study of hydrocarbon stability and oxidation, under controlled conditions of temperature, pressure, containing vessel and contact agents, for individual hydrocarbons.' This work underlies a host of practical operations in the refinery. What a multitude of vexatious problems its solution would clarify.

DR. BURRELL SEES RESEARCH NEED

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Trade associations and their activities will be given attention at the forthcoming annual meeting of the Chamber of Commerce of the United States at Cleveland May 6 to 8. It is proposed to discuss the following suggestions: That the chamber advocate creation of a commission which would define the rights of trade associations and their members in all respects, including their rights to discuss operating expense, sources of supplies for materials, prices, trade competition, etc., including a study of anti-trust laws and of the Federal Trade Commission's powers and activities; that all possible steps be taken to obtain elimination of obstacles and uncertainties which interfere with the most effective carrying out by trade associations of their function of disseminating information, and that the President of the United States be asked to direct the Attorney General to institute a test case of such a character that it will determine the legal status of activities of trade associations in gathering and giving to the public statistical information concerning production, distribution, cost and prices when no improper private use of such statistical information by the association or its members is alleged.

TO CONSIDER TRADE ASSOCIATION ACTIVITIES

Group 3 Gasoline Market Unsettled

Increased Consumption Fails to Aid Refinery Situation and Prices Are Generally Lower. Kerosene Prices Firm, With Wax Strong Feature

By C. O. Willson

Despite a continued improvement in gasoline consumption throughout the Middle West and Southwest, giving probably the heaviest consuming seven day period of the year, gasoline prices at the refineries in Group 3 (Oklahoma) after holding firm for approximately a month, slumped during the past week. The lower prices apply to straight run, blends and natural gasolines with an average reduction of ¼-cent. Kerosene maintained the strength which it developed since the first of the month and prices are practically the same as last week. Fuel oil prices and those of other fuel products are lower with no improvement in the movement. Wax continued strong with the few sales made at higher prices. There were no general changes in lubricating oils.

The lower gasoline prices are a direct development of a disappointing situation in which the movement of the product from the refineries has not been in line with the increased retail consumption. It has brought a near panicky condition among a few at least of the Group 3 refiners and those of adjoining sections which many market observers are frank to admit threatens the entire gasoline market structure, not only for the remainder of April, but the coming month. At this writing it is not definitely apparent whether the slump in prices was to result in a general frantic rush on the part of the sellers to dispose of a part of their accumulated stocks or was merely a temporary development which an improved demand might rectify before the end of the month. Market observers, although their opinions varied as to the probable trend, were a unit in agreeing that the gasoline market tendency for the remainder of the spring and early summer months will be determined within a few days.

Up to Refiners

The whole matter apparently rests entirely in the position that the refiners take at this time. If they respond to the bearish pressure of the buyers and the general uncertainty which is apparent in all branches of the industry for reasons not entirely clear, then it is agreed that the next few weeks will witness even lower gasoline prices.

On the other hand, if these same refiners, after accumulating stocks for weeks, and in some cases months, in expectation of the spring and summer demand which, due to the unfavorable weather, has just gotten under way, will do as expected and release their stocks gradually over the season of maximum gasoline consumption, it is practically certain that a slowly advancing market will develop.

The conditions of the refining end of the industry which have brought about the present unsatisfactory market situation have been outlined in these columns from time to time and are known to everyone connected with the trade. Briefly expressed, it is a situation brought about by too much operating activity on the part of the manufacturers during the winter months resulting in an accumulation of gasoline stocks which brought about a declining market starting in February and continues threatening just as the gasoline season starts.

Responsibility for this situation depends entirely on the viewpoint of the person expressing the opinion. For the refiners, it can be said that if February and March had not brought exceptionally unfavorable weather from the standpoint of gasoline consumption, the gasoline accumulation would have been 200,000,000 gallons less than it is and that excess is probably responsible for the weakness which exists.

Refiners Criticized

The refiners have been criticized, however, for maintaining their crude runs, when a declining market for weeks had given a definite warning, as it has in previous years, that their market for summer season was threatened unless they curtailed their output. How to regulate their plant operations to prevent a too large accumulation of refined stocks during the winter months and at the same time make sure that the stocks are large enough to supply the summer demand to prevent a runaway market, is the great problem of the manufacturing end of the petroleum industry as market students have many times pointed out. The present situation again emphasizes the need of some constructive action which will bring about a stabilization, the lack of which is directly responsible for those price fluctuations reflected in all petroleum markets.

But, regardless of causes, the trade at the present time is most concerned in the future possibilities of the present situation. As previously pointed out, opinions vary upon this. Gasoline stocks on March 1, according to the Bureau of Mines, totaled 1,374,221,898 gallons. Reports for March are not available at this time, but based on known conditions in regard to supply and demand for the month it is probable that stocks increased and will continue to increase over April. This is the usual development. Gasoline stocks last year did not decrease until May and then only a few million gallons. Gasoline stocks at the end of April last year, the peak period, totaled 1,259,209,171 gallons. Based on the February report of this year, it is highly probable that gasoline stocks this year will total around 1,600,000,000 gallons before the summer demand brings about a reduction.

Storage and Credit

Despite an increase in consumption over last year, estimated at 20 to 25 per cent, it would be useless to deny that this is more gasoline in storage, than is needed for a healthy market condition. Based on the probable consumption, it is out of line with stocks of previous years when conditions were normal. There is a further fact that this year more refiners are concededly not in a financial condition to hold their stocks over an indefinite period. Gasoline stocks in the jobbers' hands are also heavy, as has been shown by the fact that they have not been compelled to hurry into the market, despite a large increase in their wholesale and retail sales.

These are the conditions which has brought about the pessimism apparent among some refiners. Some have said that the demoralized gasoline situation of last year is to be duplicated and these reports, widely circulated, have been an important factor in discounting the favorable factors which are also worthy of consideration by anyone attempting to obtain an accurate gauge on conditions.

As to conditions this year and last, it is apparent that they differ outside of the fact that in both years refiners have accumulated more gasoline stocks than required. Back of the refinery situation lies the even more vital factor of crude production. As to the comparative crude situation of this year and last the readers' attention is called to the discussion on page 19 of this issue.

It is sufficient to state here that, barring the bringing in of a large new pool in the near future or unwarranted panicky action on the part of the refiners, the crude market will continue at least firm over the summer, in the opinion of those who keep in touch with crude market conditions.

These same authorities assert the manufacturers can save themselves and the industry generally from heavy losses if they will gradually work off their inventories in line with requirements of a demand which is now certain to increase from week to week. The upturn in prices will probably be slow, due to these heavy stocks, but with a strong crude situation the improvement is certain, if release of the supply is properly handled.

Gasolines and Naphtha

The general situation in regard to gasolines and naphtha has been outlined. New Navy in sufficient quantities to make a market became available at 10½ cents late last week and was offered in increasing quantities the fore part of the week. It cannot be said that the low price has stimulated sales, for although inquiries from jobbers has increased there is little, if any increase in the actual purchases of any grade of straight run gasoline. Refiners with marketing subsidiaries report a very satisfactory increase in service station sales and this report is verified by the independent jobbing interests.

With the end of the month near, May business has been apparent since the first of the week. Varied reports are in circulation as to the prices of the May delivery. It is known, however, that some business in New Navy has been placed over the month at 10½ cents and a large amount over the first 15 days.

It is needless to point out the enormous importance of this future business. If enough of it is placed before the end of April, it means that price recovery in May, as had been hoped for, is impossible. The low price is not a unanimous proposition. Many refiners are asking from 10¾ to 11½ cents for the May business and some orders have been placed within that price range. The end of the week should determine just what view of the May market is to prevail.

The low price, if it develops generally, threatens the Standard of Indiana tank wagon structure. In view of the gasoline selling activities of South Dakota and Nebraska and those of several cities, narrow margins rather than wide margins between the refinery and tank wagon prices are probable for the coming summer season and the trade generally agrees that the Standard of Indiana concern will feel compelled to lower the wholesale price of Mid-Continent prices either slump or fail to advance.

There was little activity in the higher gravity gasolines. Exporters are not interested, although it is known some attractive offers in New Navy and the higher gravities have been made them. Gasoline export prices have been reduced by the exporters and the hope is expressed

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REFINED MARKET BAROMETER

A large increase in gasoline consumption in all parts of the United States except the West Coast featured the developments of the past week which concern refined markets. Restrictions on travel due to the hoof and mouth disease along the West Coast was reflected in less gasoline consumption there. Gasoline prices at the refineries have not responded to the increased consumption however, and reports from all areas show either firm or lower prices. Export prices on both kerosene and gasoline were reduced. There is little change in the domestic kerosene situation with a fair to strong market reported from all sections except in Pennsylvania where the market is weak. Fuel oil demand is spotted but the movement is generally slow with prices lower where there are any changes. There were no general changes in lubricating oils. Wax is scarce and prices are generally higher.

Mid-Continent—The gasoline movement failed to develop the expected improvement and prices are generally lower with the exception of North Louisiana where market conditions are unchanged. A generally fair movement of kerosene was reported in all areas with prices either firm or advancing. Fuel oil is soft with lower prices prevailing in Oklahoma. Natural gasolines weak with prices from ¼ to ½ cent lower. Demand for summer lub oil fair with price concessions in the winter grades.

Atlantic Seaboard—Gasoline export prices except in cases reduced ¼ to 1 cent. Domestic gasoline market soft although consumption at service stations has increased. Export kerosene prices reduced ½ cent with slow movement. Receipts of crude and refined products show large increase in takings from Gulf Coast and reduction in California products.

California—Less gasoline consumption due to restrictions resulting from hoof and mouth disease. Gasoline prices firm except natural gasolines which are ½ to ¾ cents lower. Lubricating and fuel oil strong.

Chicago—Marked improvement in gasoline consumption with plenty of gasoline being offered by refiners at lower prices. Kerosene demand continues strong with prices firm. Fuel oil stronger with prices unchanged. Gas oil quiet. Movement of lub oils satisfactory.

Gulf Coast—Stocks of zero test lubricating oils low with steady movement. No important price changes in any grades. Gas oil scarce due to large export orders.

California Report On Refined Market An Added Service

Beginning with this issue The Oil and Gas Journal has added California to the refining and marketing areas from which timely and reliable market reports are received weekly. Weekly quotations on representative refined products in California will be given in the market pages together with a weekly review of general market conditions on the West Coast.

The Oil and Gas Journal is the first oil trade publication to add this important service to those interested in refined markets. With this addition the weekly reports now cover every important domestic and export marketing center with more complete data than found in any market or trade publications.

Natural Gasoline Manufacturers Meet

President D. E. Buchanan Offers Resolutions Pledging Support of Association in Movement to Educate Public Regarding Oil Business

The opening session of the third annual convention of the Association of Natural Gasoline Manufacturers, in the Elks' Club, Tulsa, April 23, was one of the largest held by an oil trade association in recent years. Total attendance was close to 200 and scores who did not register for the initial meeting were expected to sign up later.

Calling attention to the present political situation and the attacks upon the oil industry, D. E. Buchanan, president, introduced and read a resolution for the approval of the association, asking its action in connection with other oil trade associations in organizing and carrying out an educational program showing the facts of the petroleum industry for the benefit of the American people. The resolution was to be acted upon at the business session, Thursday morning.

Frank Chase, of the Lone Star Gas Co., Dallas, Texas, presided at the opening session and introduced Pat Malloy, Tulsa attorney, who delivered the address of welcome. Charles F. Bevan, of the Pacific Gasoline Co., Los Angeles, Cal., read his paper on "The Future of the Natural Gasoline Industry in California," which was followed by a brief discussion.

Activities During Year

In his annual address, Mr. Buchanan enumerated the features which marked the progress of the association since the 1923 meeting. "Improvements Patents" were the subject of a report by George A. Prevost patent attorney of Washington, D. C. This matter was a hangover from the Saybolt patent suit of 1922.

The association was preparing to issue statistics on the natural gasoline industry when former Attorney General Daugherty rendered his opinion that trade associations could not legally disseminate information of statistical nature to its members. The program accordingly has been held in abeyance.

The association, in conjunction with the American Petroleum Institute, secured a modification of the storage clause. Storage Rule No. 6 now definitely excludes the tracks owned or leased by members of the industry and those located on their property or leased by them unless such track is inside the carrier's right of way, yard or terminal.

Mr. Buchanan spoke of outage regulation, which has been unchanged during the year and the matter of specifications, which likewise has not had material revision. The subject of residue gas was turned over to a committee expected to report soon. The president praised the work of the officers and the various committees for their cooperation in matters of importance to the industry.

President Buchanan's Address

"In the past, busy with our own problems, this association has not taken a very active part in the general petroleum situation, except in such matters as affected our particular branch," declared Mr. Buchanan. "That was the proper policy because the association was new and there was such a crying need for the correction of many matters of immediate and vital importance to the development of our particular business. We have successfully disposed of many of those matters, while we have been doing so we have been gaining strength for the supreme test which I believe is at hand.

"I venture to say that every one of you has wondered, as you have read the wanton attacks upon the entire petroleum industry, why some, or all of the associations have taken no steps to counteract what you knew to be vicious political propaganda. You know you are honest, you know the petroleum industry is honest and you cannot understand why it has not raised its hand in its own defense.

"Through all the talk about gasoline prices being too high, the public being gouged through the operation of gasoline trusts or monopolies and the various State executives demanding nationwide investigations, you have known that your profits last year were very meager, if anything at all; you have known that you had no hand in gouging the public if it was gouged, and you have known there was nothing in your conduct to warrant a Federal or State investigation.

"The fact that the industry has done nothing to defend itself before the bar of public opinion is probably responsible for the many attacks that have been made against it. The task before us today is too big to be undertaken by a few. Only through concerted action on the part of every individual and company in the business will the desired and necessary result be obtained.

Should Join Publicity Campaign

"This association should join with the other oil trade associations in an educational campaign designed to place in the hands of the public the information it must have in order to be in position to pass final judgment on the question whether this great petroleum industry shall continue to function through the achievements of individual incentive, or be shackled by government regulation or ownership, individual incentive set at naught and the very political supremacy of this nation placed in jeopardy."

Mr. Buchanan called attention to the fact that the people had been given only one side of the matter through the daily papers.

He outlined the probability of governmental regulation of the entire petroleum industry. "The American people, when they know the story of petroleum, will never substitute governmental bureaucracy for the individual incentive

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RESOLUTIONS URGE PROMPT PUBLICITY ON FACTS OF PETROLEUM INDUSTRY

Whereas: The petroleum industry is at this time placed in a false position in the mind of the American public through no act of the industry as a whole, and

Whereas: We know and appreciate that petroleum has played the most vital part in the development of the industrial and commercial supremacy of this nation, and that petroleum is and will be the determining factor in maintaining the position the United States now occupies among the nations of the world, and

Whereas: There is grave danger that the oil industry will lose the confidence of the people and the respect it has always enjoyed, and to which it is entitled, if the ruthless, unwarranted attacks continue and no defense is made in its behalf, and

Whereas: Such loss of confidence and respect would constitute such a handicap as would adversely affect the industrial life of the Nation, through the inability of the petroleum industry to function as its economic position requires.

Therefore: Be it resolved; that the manufacturers of natural gasoline, in annual convention assembled, deplore the position in which the industry has been placed and further deplore the inaction of the natural gasoline industry in not placing in the hands of the public the facts it must have in order to form a fair and honest opinion of the merits of the petroleum industry, and that the Association of Natural Gasoline Manufacturers is hereby authorized to launch a campaign of education in order that the American people may be fully acquainted with the facts of petroleum to the end that the great petroleum industry may be fully vindicated.

NATURAL GASOLINE MANUFACTURERS AT THIRD ANNUAL CONVENTION IN TULSA THIS WEEK

—Photo by Ward Commercial, successor to Hoefler Shuler.

Inquiry Shows Why Public is Prejudiced

Investigation By The Oil and Gas Journal in Various Cities Proves Great Need of Educational Campaign. Silly Answers Given Natural Questions of Motorists Reflected in Political Investigations. If Doubtful, Try It Yourself Anywhere

The only real point of contact between the general public and the petroleum industry, representing an investment of approximately $10,000,000,000, is the filling station attendant. Whenever the public desires to obtain information about the oil business or phases of it regarding price adjustments in which it is especially interested, it is but natural to direct questions to the persons connected with the oil business the public actually meets. These persons are the filling station attendants from whom the public buys gasoline and lubricating oils.

Realizing this fact, The Oil and Gas Journal directed its staff correspondents in various sections of the country to drive to filling stations in their territories and ask the questions listed in the box on the opposite page. The reason the public may be so prone to misunderstand the oil business is shown by the reports of these correspondents.

The questions were asked at filling stations in the principal sections of the various cities where, it is presumed, the companies place their best attendants. These filling stations are owned and operated by some of the largest distributing companies in the oil business. No names of companies or attendants are given in these reports. The Oil and Gas Journal simply desires to bring to the attention of the oil companies the condition which exists and which it earnestly hopes will be corrected soon. If there is any doubt in the mind of any oil company executive or other person that the answers as given in these reports of The Oil and Gas Journal correspondents are correct, he can convince himself quickly by driving to any filling station and asking the same questions in a casual manner. The names of the oil companies operating the filling stations at which the answers given in this article are quoted, are on file in the office of The Oil and Gas Journal. Following are the reports from various centers.

At the Nation's Capital
By Charles E. Kern

WASHINGTON, D. C., April 19.—At one of the service stations near the Capitol, the filling station attendant confessed entire ignorance as to the cause of price changes in gasoline.

"You will have to ask someone who knows more than I do," he said when asked the cause of the increase in price since last December.

Then, as if possessed of a bright idea, he made an attempt to clarify the situation by adding: "It is like sugar. You know the price of sugar goes up and down."

Several blocks from this station is a long established filling station. The young man there seemed dazed when asked the questions and appeared as if a new thought had been propounded when asked about gasoline price changes. When these questions were asked him he said, hesitatingly, "Why, it just jumps."

Something like a grasshopper, the price of gasoline jumps one way now and then changes its course and jumps another way, the reason for which no man knoweth. That was all this attendant could make out of the changes that occurred in the price of gasoline and yet he was a very intelligent appearing man.

OIL INDUSTRY ITSELF LARGELY RESPONSIBLE

That the oil industry of America is being damned from within and not from without can be judged by the answers to simple and elementary questions asked by staff correspondents of The Oil and Gas Journal all over the United States.

These correspondents were instructed to drive up to the filling station, ask the questions as outlined in the accompanying article and faithfully record the answers.

The result of this investigation should shock every executive of all oil companies in the United States. They are tragic when it is recalled that the public's contact with the second greatest industry includes 90 per cent of this calibre of intelligence.

When it is figured that 15,000,000 motorists each week have their heads filled with nonsense by the vendors of gasoline no diagnosis is necessary to point out the cancerous cause of present day public prejudice.

No better or greater thing could be done by the petroleum industry in every branch at this time than to educate the man at the filling station. It is absolutely imperative if the industry expects to free itself from public misrepresentation and abuse every time supply and demand compels a higher price for gasoline and lubricants.

When it is considered that billions of dollars are invested in the oil business; that millions are spent securing leases and finding and transporting oil; that is refined and delivered in tank cars and wagons to expensive filling stations, what a disaster it is that the public must come in contact with men who cannot explain in a common sense way the natural questions asked by customers.

A national campaign of two weeks educating the filling station man and a distribution of the right sort of literature would result in a better verdict for oil.

The oil industry as a whole and the many associations promoting the growth and progress of the business in particular have a mighty big job to plan and execute requiring their united strength, initiative and effort. The results will benefit the producer and refiner and eventually when it is necessary to ask a fair price for oil products the public will be convinced that the industry is entitled to profits commensurate with the risks of this most hazardous business.

Some Real Information
By P. C. Lauinger

PITTSBURGH, Pa., April 19.—The hills in Pennsylvania, the location of an office of the Standard Oil Co. in Ohio, price manipulation and a myriad other things result in gasoline selling at a price higher in Pennsylvania than in Ohio, according to statements made by filling station attendants here. The fact that Pennsylvania has a State tax of 2 cents a gallon on gasoline which is collected from the retailer and is naturally added to the price of gasoline and the fact that Ohio does not have such a tax, apparently is unknown to filling station attendants in this district, although it is but a short distance from here to the Ohio line. The following are answers received to the questions asked, the questions being numbered according to the questions as given elsewhere in this article:

1. "I haven't the slightest idea."
2. "I don't know; I never heard about Governor McMaster."
3. "I know gasoline is cheaper in Ohio than in Pennsylvania. That is because the Standard Oil Co. has its headquarters in Ohio and wants to be popular in its home State."
4. "I have not worked here long enough to go into the details of the gasoline business."

At Another Station

1. Because the weather is getting nice and the oil companies know that the people will be using their cars more. Hence up goes the price."
2. "I don't know. It doesn't cost anything to manufacture this stuff (gasoline). Why, they used to throw it away!"
3. "I don't know."
4. "The way I dope it out is that the people will use their cars anyway, so the companies just fix the price to suit themselves. When they feel like getting more money they increase the price of gasoline."

Ask the Wholesaler

1. Don't ask me, I don't know anything about it. They just tell us to boost the price and up she goes."
2. Governor McMaster lost money on the gasoline he sold. He took the loss because it benefited him in a political way."

SHE:-"BEG PARDON MISTER, WHY IS GASOLINE CHEAPER IN KANSAS THAN IN OKLAHOMA?
HE:-"WELL, MOM, I CAN'T ANSWER THAT, BUT, A MAN OUGHTA HAVE SOMETHING FOR LIVING IN KANSAS.

WHY IS THE PRICE OF GASOLINE RAISED AND LOWERED AT ANY TIME?
WELL SUH, WHEN MR. ROCKEFELLER GIVES ANY MONEY TO CHARITY - HE PUTS UP THE PRICE OF GASOLINE TO GET BACK HIS LIBERAL DONATION

WHY IS GASOLINE HIGHER IN PENNSYLVANIA THAN IN OHIO?
WE NEED HIGHER RATES HERE BECAUSE OF THE HILLS. OHIO IS LEVEL AND THEY DO NOT NEED SO GOOD A GRADE THEY COULD NEARLY USE KEROSENE
OHIO 7734

3. "I know gasoline is a lot cheaper in other States than in Pennsylvania but I do not know why this is."
4. "We do not know anything about the price changes of gasoline. You would have to work in the wholesale branch of the oil business to find that out. We just follow orders and know nothing."

One Knows About Taxes

1. "I will be darned if I know."
2. "Governor McMaster bought a lot of gasoline that the Independents were trying to work off at a low figure. He had to quit eventually as he could not buy any more."
3. "Gasoline prices differ in adjoining States due to different State taxes."
4. "Manipulation. The companies could sell for 20c a gallon (present price 25c to 28c a gallon) and make money. It costs them about 16c to produce and 1½c to distribute. The companies have to allow for big fire losses. We lost about a million dollars last year by fire."

Hills Increase the Cost

1. "In December there was an overproduction and the storage of the various companies was full of gasoline so that they had to sell at a reduced price."
2. "Governor McMaster was able to buy gasoline cheaper because he bought it in probably hundred car lots and got it at a lower figure than the market. In other words, buying a large volume he was able to buy for less."
3. "In Ohio gasoline is 2c lower than in Pennsylvania because it is an inferior grade of gasoline. We in Pennsylvania need a higher grade because of the many hills. Ohio is so level that they do not need the good gasoline we find necessary. In Ohio they could pretty nearly use kerosene."
4. "The cost of crude oil regulates the price of gasoline. When crude is up, as at present, gasoline goes up correspondingly."

John D.'s Fault Again

1. "I don't know, unless John D. needs a few hundred thousand to make an even 'so many' million."
2. "The oil companies could sell for less if they wished. No oil company would sell gasoline to him at a price lower than the posted price. Where was he getting it? Did he have his own wells? The Standard Oil Co. fixes the price of gasoline and all the companies change their prices at the same time."
3. "That is on account of the different State taxes. Some States tax as high as 5c a gallon on gasoline."
4. "I don't know."

Not Told the Reason

1. "I could not say, unless it is because the oil companies have been cutting in on their reserve supply. The price always goes up in the summer time anyway."
2. "The oil companies could sell at a lower price if they wanted to. They succeeded in putting Governor McMaster out of the oil business pretty quick though."
3. "I don't know. Ohio is lower than Pennsylvania because of no State tax in Ohio."
4. "I don't know. Maybe it is on account of the reserve supply of oil. They just tell us the night before when there is to be any change in price. We do not know the whys or wherefores."

Hills and John D. Again

1. "I don't know. It's gone up, that's all I know."
2. "He just bought a lot of it real cheap. The oil companies could sell for a lot less. They make a big profit."
3. "I don't know. In this locality people need and use a lot of gasoline on account of the hills, so they raise the price because the people will buy it anyway. Other places it is lower because they don't use so much of it."
4. "When Rockefeller gives any money away to charity he put up the price of gasoline to get back his donation."

Cruce Finally Mentioned

1. "The Lord knows. I don't understand it at all."
2. "I don't know how Governor McMaster was able to do that."
3. "I don't know why the prices vary in the different States. We have a 2c tax in Pennsylvania and some States don't have any tax. This probably has something to do with the fluctuation."
4. "They (the oil companies) claim the increased cost of crude oil in Pennsylvania was the reason for the last advance in the price of gasoline here."

QUESTIONS ASKED AT FILLING STATIONS

(The correct answers were compiled from "The Oil Industry's Answer")

Q.—Why is it that gasoline costs so much more now than it did last December?

A.—Prices of crude oil from which gasoline is made have advanced in some instances as much as $1.65 a barrel since last November and December. The production of crude oil has decreased since last December while consumption of crude has increased greatly. This widening of the margin between the supply and the demand caused the price of crude to be advanced because it was necessary to stimulate drilling in order to procure more oil.

Q.—Why was it that Governor McMaster of South Dakota could sell gasoline last summer at a price lower than the price posted by the oil companies?

A.—The greatest period of overproduction of crude oil in the history of the petroleum industry was experienced last year. California crude and gasoline were shipped to the eastern markets in large quantities for the first time in the history of the oil industry. This resulted in very little demand, comparatively, for the crude and gasoline from the Mid-Continent and Central West sections of the country. Refiners had stored large quantities of gasoline during the previous winter and spring so as to be prepared to take care of the greatly increased demand which they expected. When California crude oil and gasoline shut the Mid-Continent and Central West out of the eastern market, some of the smaller refiners were unable financially to carry these large stocks and they needed money badly. They were forced to sell enough of their gasoline below actual cost of manufacture to procure the money they needed to live on and continue their business. This is the gasoline, bought below actual cost of manufacture, which Governor McMaster and others were able to buy and sell below the prices asked by the oil companies.

Q.—Why is it I can buy gasoline in one State at one price and maybe go just across the line into another State and have to pay anywhere from 1 to 4 cents a gallon more?

A.—The difference in most cases is due to State taxes levied on gasoline by the States. It is estimated these taxes will amount to more than $75,000,000 during 1924. Gasoline prices throughout the United States are basically the same. To the cost of manufacture must be added the cost of transporting the gasoline to the point of sale and to this the taxes which are levied by the State or city governments.

Q.—Why is the price of gasoline raised or lowered at any time?

A.—Gasoline prices depend upon the price being paid for crude oil from which gasoline is made. When there is a surplus of crude oil as was the case last year, prices of crude automatically decline and this decrease is reflected in lower prices of gasoline. When there is a shortage of crude oil or the demand for crude and gasoline is greater than the production of crude oil, prices of crude oil are increased in order to stimulate drilling so that more oil may be procured. These advances in crude oil prices naturally result in higher gasoline prices.

WHY IS THE PRICE OF GASOLINE RAISED OR LOWERED?
GASOLIN
SEARCH ME—— THE COMPANIES NEVER TELL US ANYTHING EXCEPT WHAT TO GET FOR GAS AND WE EITHER HAVE TO GET IT OR ELSE ——
GAS 2¢ LOWER TO-DAY

WHY DOES GASOLINE COST MORE NOW THAN IT DID LAST DECEMBER
I DON'T KNOW UNLESS JOHN D. NEEDS A FEW HUNDRED THOUSAND TO MAKE AN EVEN "SO MANY" MILLION ——

The Situation in New York
By L. M. Fanning

NEW YORK, April 19.—Probably 75 per cent of the motorists or more are buying their gasoline and lubricating oils at garages and curb pumps in this section. Following are answers to the questions asked at various places:

1. "The Government got after the oil companies last year and made them put the price of gasoline down. The government and the State authorities are still after the oil companies but somehow prices went up this year anyway."
2. "I guess that was because of a price war."
3. "I've never been able to understand that."
4. "Gasoline prices change when crude oil prices change, but I don't know what makes crude prices go up or down. I guess it's supply."

Curb Pump Man

1. "Search me."
2. "Didn't know about that."
3. "Don't know."
4. "If there's a gas war the price goes down. The gas war is over now so prices go up."

Garage Pump Man

1. "Don't know. I guess Rockefeller gave away a little money."
2. "Local conditions and I don't know the causes."
3. "Don't know."
4. "They don't tell us why."

Curb Pump Man

1. "I don't know. We're simply notified of a change when it is made and they kept jumping the price 2 cents at a clip early in the year."
2. "I don't know."
3. That's something I don't know."
4. "I don't know what causes gasoline price changes."

Garage Pump Man

1. "Gasoline always goes down in the winter and up in the spring and summer. This year it went up a little early because the weather was good."
2. "They had a gasoline war out there."
3. "I suppose it's due to transportation or something."
4. "It depends on the season. The price of gasoline always goes up early spring or summer as soon as the cars get out on the road and gasoline becomes a necessity. The oil companies manage to charge the most for gasoline when gasoline is most needed. They don't seem to care about winter prices. This is something I have never been able to understand. I should think when there's less demand the companies would charge more for gas to make it worth while to sell smaller quantities. But when gas is in demand during the summer I should think they'd reduce the price so as to increase sales. But they seem to think motorists will buy anyway in the summer so they charge them as much as they can. I guess they're right too, because automobile drivers do buy just the same at high prices. I think the price of gasoline is too high."

Garage and Service Station

1. "Crude oil is higher."
2 and 3. "Don't know."
4. "Crude oil fluctuates like the stock market. It goes up a few points and down a few points every day. Sometimes it fluctuates violently and that's why gasoline goes up and down so much."

Service Station and Garage

1. "The question is not why did gasoline go up but why did it go down? They say overproduction last year was the reason for the drop but they don't tell us why the prices change as a general rule. I suppose the Standard wants higher prices now and it's a case of taking what the Standard wants. Other companies do what the Standard does. Anyway, its like the telephone company. It's a monopoly. It you don't like it, they'll

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REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

GASOLINE AND NAPHTHA

CHICAGO DIST. (Based on Group 3)—	April 22		April 15		April 8	
50-52 450 end point (Naphtha)	.10	.10¼	.10¼	.10½	.10¼	.10½
56-58 450 end point	.10¼	.10¾	.10¼	.10½	.10¼	.10½
58-60 437 end point (New Navy)	.10¾	.11	.10¾	.11	.10¾	.11
60-62 400 end point	.11¾	.12	.11¾	.12	.11¾	.12
64-66 375 end point	.13	.13¼	.13	.13¼	.12¾	.13¼
68-70 360 end point	.13½	.13¾	.13¾	.14	.13¾	.14
OKLAHOMA (Group 3)—						
50-52 450 end point (Naphtha)	.10	.10¼	.10¼	.10½	.10¼	.10½
56-58 450 end point	.10¼	.10½	.10¼	.10½	.10¼	.10½
58-60 437 end point (New Navy)	.10½	.10¾	.10¾	.11	.10¾	.11
60-62 400 end point	.11½	.11¾	.11¾	.12	.11¾	.12
64-66 375 end point	.12¾	.13	.12¾	.13¼	.13	.13¼
68-70 350-365 end point	.13¼	.13½	.13¼	.13¾	.13½	.13¾
KANSAS—						
58-60 437 end point (New Navy)	.10¾	.11¼	.11	.11½	.11	.11½
NORTH TEXAS—						
48-52 450 end point (Naphtha)	.10	.10¼	.10	.10¼	.10	.10¼
50-52 440 end point (Naphtha)	.10¼	.10½	.10¼	.10½	.10¼	.10½
56-58 450 end point	.10¼	.10½	.10¼	.10½	.10¼	.10½
58-60 437 end point (New Navy)	.10½	.10¾	.10½	.11	.10½	.11
60-62 400 end point	.11½	.11¾	.11¾	.12	.11¾	.12
64-66 390 end point	.12¼	.12½	.12½	.12¾	.12¾	.13
64-66 375 end point	.12½	.12¾	.12¾	.13	.13	.13¼
68-70 360 end point	.13¼	.13¾	.13¼	.13¾	.13½	.13¾
NORTH LOUISIANA—						
56-58-450 end point	.10½	.11	.10¾	.11	.10¾	.11¼
58-60 437 end point (New Navy)	.11	.11¼	.11	.11½	.11	.11½
60-62 400 end point	.12	.12¼	.12¼	.12½	.12¼	.12½
64-66 375 end point	.13½	.13¾	.13½	.13¾	.13½	.14
64-66 390 end point	.12½	.13	.13	.13¼	.13	.13¼
ARKANSAS—						
58-60 450 end point	.10¾	.11	.11	.11¼	.10¾	.11
58-60 437 end point (New Navy)	.11	.11¼	.11¼	.11½	.11	.11¼
64-66 375 end point	.12¾	.13	.13	.13½	.13¼	.13½
ROCKY MOUNTAIN STATES—						
*58-60 437 end point (New Navy)	.13½	.13¾	.13½	.14	.13½	.14
PENNSYLVANIA—						
52 Naphtha	.12		.12¼		.12¼	
54 Naphtha	.12¼		.12½		.12½	
56 Gasoline	.12½		.12¾		.12¾	
58 Gasoline	.13		.13¼		.13¼	
60 Gasoline	.13¾		.14		.14	
62 Gasoline	.14¼		.15		.15	
64 Gasoline	.15¼		.16		.16	
66 Gasoline	.16¼		.17		.17	
68-70 Gasoline	.17¾		.18¼		.18¼	
CALIFORNIA—						
54-56 437 end point (New Navy)	.12	.12½				

*Colorado points.

NATURAL GASOLINE

CHICAGO DIST. (Based on Group 3)—	April 22		April 15		April 8	
Grade A, 72-78, under 375 e.p., rec. 90%	.09¾	.10	.09¾	.10	.09¾	.10
Grade B, 76-82, 375 end point, rec. 85%	.08¾	.09	.08¾	.00	.08¾	.09
Grade C, 80-88, 350 end point, rec. 78%	.08	.08¼	.08	.08¼	.07¾	.08
OKLAHOMA (Group 3)—						
Grade A, 72-78, under 375 e.p., rec. 90%	.09½	.09¾	.09¾	.10	.09¾	.10
Grade B, 76-82, 375 end point, rec. 85%	.08½	.08¾	.08¾	.09	.08¾	.09
Grade C, 80-88, 350 end point, rec. 78%	.08	.08¼	.08	.08¼	.08	.08¼
Grade D, 88-92, 350 end point	.07¾	.08	.08	.08¼	.08	.08¼
NORTH TEXAS—						
Grade A, 72-78, under 375 e.p., rec. 90%	.09¼	.09½	.09½	.10	.09½	.10
Grade B, 76-82, 375 end point, rec. 85%	.08¼	.08½	.08½	.09	.08½	.09
Grade C, 80-88, 350 end point, rec. 78%	.07¾	.08	.08	.08¼	.07¾	.08¼
NORTH LOUISIANA—						
Grade B, 72-78, under 375 e.p., rec. 90%	.08¼	.08½	.08½	.08¾	.08½	.08¾
Grade C, 76-82, 375 end point, rec. 85%	.07¾	.08¼	.07¾	.08¼	.07¾	.08¼
CALIFORNIA—						
68-76 410 end point absorption	.10½	.11¼				
78-84 350 end point compression	.10					

MOTOR NATURAL GASOLINE (BLEND)

CHICAGO DIST. (Based on Group 3)—	April 22		April 15		April 8	
58-62 437 end point	.10	.10¼	.09¾	.10	.09¾	.10
60-62 450 end point	.09¾	.10	.09¾	.10	.09½	.10
64-66 450 end point	.09¾	.10	.09¾	.10	.09½	.10
OKLAHOMA (Group 3)—						
60-62 450 end point	.09½	.09¾	.09½	.10	.09½	.10
64-66 437 end point	.09½	.09¾	.09½	.10	.09½	.10
68-70 430-435 end point	.09½	.09¾	.09½	.10	.09½	.10
NORTH TEXAS—						
58-62 440 end point	.09½	.09¾	.09½	.09¾	.09½	.09¾
58-60 450 end point	.09½	.09¾	.09½	.09¾	.09½	.09¾
PENNSYLVANIA—						
*60-62	.14		.14		.14	
*64-66	.14		.14		.14	
*66-68	.14		.14		.14	
*68-70	.14		.14		.14	

*At Sistersville, W. Va.

BURNING OIL

CHICAGO DIST. (Based on Group 3)—	April 22		April 15		April 8	
41-43 water white Kerosene	.04¼	.04½	.04¼	.04½	.04⅜	.04⅝
42-44 water white Kerosene	.04⅝	.04⅞	.04½	.04¾	.04⅜	.04⅝
OKLAHOMA (Group 3)—						
41-43 water white Kerosene	.04¼	.04½	.04¼	.04½	.04	.04⅜
42-43 water white Kerosene	.04⅜	.04¾	.04½	.04¾	.04⅜	.04⅝
41-43 prime white Kerosene	.04	.04¼	.04	.04¼	.03⅞	.04⅛
KANSAS—						
41-43 water white Kerosene	.04¾	.05	.04¾	.05	.04½	.04⅝
ROCKY MOUNTAIN STATES—						
*40-42 water white Kerosene	.07¾		.07¾		.07½	
NORTH TEXAS—						
41-43 water white Kerosene	.04¼	.04½	.04¼	.04½	.04	.04⅜
41-43 prime white Kerosene	.04	.04¼	.04	.04¼	.03¾	.04
40-42 prime white Kerosene	.04	.04¼	.04	.04¼	.03¾	.04
42-44 water white Kerosene	.04½	.04¾	.04½	.04¾	.04¼	.04⅝
NORTH LOUISIANA—						
41-43 prime white Kerosene	.04¾	.05	.04¾	.05	.04¾	.05
42-44 water white Kerosene	.05	.05¼	.05	.05¼	.05	.05⅛
PENNSYLVANIA—						
43 Kerosene prime white	.06¾		.06¾		.06¾	
45 Kerosene water white	.06⅞		.07		.07	
46 Kerosene water white	.07⅜		.07½		.07½	
47 Kerosene water white	.08		.08		.08	
36 Miners' Neutral	.07¼		.07¼		.07¼	
34 Neutral	.07¾		.07¾		.07¾	
34 Sundebloomed Neutral	.09		.10		.10	
300 Mineral Seal	.07¾		.07¾		.07¾	
CALIFORNIA—						
40-42 water white	.09					

*Colorado points.

FUEL OILS

CHICAGO DIST. (Based on Group 3)—	April 22		April 15		April 8	
24-26 Fuel Oil (sellers' cars, Group 3)	1.00	1.10	.95	1.00	1.00	1.05
22-24 (El Dorado)	.95	1.00	.90	.95	.90	1.00
18-20 (Smackover)	.90	.95	.90	.95	.90	.95
32-36 Gas Oil	.03⅛	.03¼	.03⅛	.03¼	.03⅛	.03⅛
38-40 Straw distillate	.03½	.03¾	.03½	.03¾	.03½	.03⅝
KANSAS—						
24-26 Fuel Oil	1.05	1.15	1.15	1.20	1.15	1.20
32-36 Gas Oil	.03⅛	.03¼	.03¼	.03⅜	.03¼	.03⅜
38-40 Distillate	.03¼	.03½	.03½	.03¾	.03⅜	.03⅝
OKLAHOMA (Group 3)—						
24-26 Fuel Oil (buyers' cars)	.95	1.00	1.00	1.05	1.00	1.05
24-26 Fuel Oil (sellers' cars)	.97½	1.02½	1.02½	1.07½	1.02½	1.07½
28-30 Fuel Oil (sellers' cars)	1.05	1.10	1.12½	1.15	1.10	1.15
32-36 Gas Oil	.03	.03⅛	.03⅛	.03⅜	.03	.03⅛
38-40 Straw distillate	.03¼	.03½	.03½	.03⅝	.03½	.03⅝
NORTH TEXAS—						
24-26 Fuel Oil	.90	.95	.92½	.97½	.90	.95
26-30 Fuel Oil	.95	1.00	1.00	1.05	1.05	1.10
32-36 Gas Oil	.03	.03⅛	.03⅛	.03¼	.02⅞	.03⅛
36-38 Gas Oil	.03⅛	.03¼	.03¼	.03½	.03¼	.03⅜
38-40 Straw distillate	.03¼	.03½	.03½	.03⅝	.03½	.03⅝
NORTH LOUISIANA—						
20-22 Fuel Oil	.92½	.95	.95	.97½	.92½	.97½
32-36 Gas Oil	.03¼	.03½	.03¼	.03½	.03⅜	.03⅝
38-40 light Straw distillate	.03½	.03¾	.03½	.03⅝	.03⅜	.03⅝
ARKANSAS—						
38-40 Distillate	.03½	.03⅝	.03⅝	.03⅞	.03½	.03⅝
32-36 Gas Oil	.03¼	.03½	.03½	.03⅝	.03⅝	.03⅝
22-26 Refinery Fuel Oil	1.00	1.05	1.02½	1.07½	1.02½	1.07½
GULF COAST (South Texas)—						
Gas Oil	.05	.05½	.05	.05½	.05	.05½
Fuel Oil	1.90	2.00	1.95	2.10	1.95	2.05
PENNSYLVANIA—						
30-34 Fuel Oil	.05½		.05½		.05½	
36-40 Fuel Oil	.05¾		.05¾		.05¾	
CALIFORNIA—						
33-36 Distillate	.04	.04½				
27-33 Distillate	.03¼	.03¾				
15-20 Fuel Oil	1.40					

ROAD OILS

CHICAGO DIST. (Based on Group 3)—	April 22		April 15		April 8	
50-60 Asphaltic Content	1.30	1.40	1.30	1.40	1.30	1.40
60-70 Asphaltic Content	1.35	1.45	1.40	1.50	1.40	1.50
OKLAHOMA (Group 3)—						
40-50 Asphaltic Content	1.15	1.25	1.15	1.25	1.15	1.25
50-60 Asphaltic Content	1.25	1.35	1.25	1.35	1.25	1.35
60-70 Asphaltic Content	1.35	1.45	1.35	1.45	1.35	1.45

NEUTRAL OILS

OKLAHOMA (Group 3)— Pale Neutrals:	April 22		April 15		April 8	
70-80 vis., 2½ color, 20-25 cold test	.04	.04½	.04	.04½	.04	.04½
100 vis., 2 color, 20-25 cold test	.06	.06½	.06	.06½	.06	.06½
100 vis., 3 color, 20-25 cold test	.05½	.06	.05½	.06	.05½	.06
150 vis., 3 color, 20-25 cold test	.12½	.13	.12½	.13	.12¾	.13
150 vis., 4 color, 20-25 cold test	.12	.12½	.12	.12½	.12	.12½
180 vis., 4 color, 23-28 cold test	.14¼	.14¾	.14¼	.14¾	.14¼	.14¾
180 vis., 3 color, 23-28 cold test	.15	.15½	.15	.15½	.15	.15½
200 vis., 3 color, 23-28 cold test	.16	.16½	.16	.16½	.16	.16½
200 vis., 4 color, 23-28 cold test	.15½	.15¾	.15¼	.15¾	.15¼	.15¾
200 vis., 3 color, 25-30 cold test	.16	.16½	.16	.16½	.16	.16½
220 vis., 4 color, 25-30 cold test	.16¼	.16¾	.16¼	.16¾	.16¼	.16¾
240 vis., 3 color, 25-30 cold test	.18	.18½	.18	.18½	.18	.18½
240 vis., 4 color, 25-30 cold test	.17¼	.17¾	.17¼	.17¾	.17¼	.17¾
280 vis., 3 color, 25-30 cold test	.20	.21	.20	.21	.20	.21
280 vis., 4 color, 25-30 cold test	.19	.20	.19	.20	.19	.20

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

Red Neutrals:						
180 vis., 5 color, 23-28 cold test	.13½	.14	.13½	.14	.13½	.14
180 vis., 6 color, 23-28 cold test	.12¾	.13¼	.12¾	.13¼	.12¾	.13¼
200 vis., 5 color, 23-28 coldtest	.14½	.15	.14½	.15	.14½	.15
200 vis., 6 color, 23-28 cold test	.13¼	.13½	.13¼	.13½	.13¼	.13½
220 vis., 5 color, 25-30 cold test	.15	.15½	.15	.15½	.15	.15½
220 vis., 6 color, 25-30 cold test	.14¾	.15¼	.14¾	.15¼	.14¾	.15¼
240 vis., 5 color, 25-30 cold test	.16	.16½	.16	.16½	.16	.16½
240 vis., 6 color, 25-30 cold test	.15¾	.16	.15¾	.16	.15¾	.16
280 vis., 5 color, 25-30 cold test	.18	.18½	.18	.18½	.18	.18½
150-160 vis., S. R. green, 40-50 cold test	.10	.10½	.10	.10½	.10	.10½
190-200 dark green, 40-50 cold test	.09	.09½	.09	.09½	.09	.09½
600 filtered	.16¼	.16½	.16¼	.16½	.16¼	.16½
390-600 Bright Stock	.28	.29	.28	.29	.28	.29
600-610 Bright Stock	.32	.34	.32	.34	.32	.34
Waxes:						
124-126 White Crude Scale Wax	.05¼	.05½	.04¾	.05	.04¾	.05
PENNSYLVANIA—						
150, 3 color	.27		.27½		.27½	
180, 3 color	.29		.30		.30	
300, 3 color	.31		.31½		.32	
220, 3 color	.33½		.33½		.33½	
600, steam refined	.22½		.22½		.22½	
635, steam refined	.25¼		.25¼		.25¼	
650, steam refined	.26½		.26½		.26½	
600, Pennsylvania flash	.30½		.30½		.30½	
630, Pennsylvania flash	.34		.34		.34	
*550, E filtered	.23¾		.23¾		.23¾	
*600, E filtered	.25½		.25½		.25½	
900, E filtered	.24		.24		.24	
600, D filtered	.31		.31		.31	
550, E filtered	.20		.20		.20	
550, D filtered	.22		.22		.22	
Pennsylvania Bright Stock	.38½		.38½		.38½	
†122-124 White Crude Scale Wax	.06		.05⅝		.05⅝	
†122-124 White Crude Scale Wax	.05⅞		.05¾		.05¾	
GULF COAST (South Texas)—						
Zero Black	.08	.08½	.08	.08½	.08	.08½
No. 2 color, 100 vis., pale oil	.10½	.12	.10½	.12	.10½	.12
No. 2 color, 150 vis., pale oil	.13	.14	.13	.14	.13	.14
No. 3 color, 200 vis., pale oil	.15½	.17	.15½	.17	.15½	.17
No. 3 color, 300 vis., pale oil	.17½	.19	.17½	.19	.17½	.18½
No. 3½ color, 500 vis., pale oil	.20½	.22	.20½	.22	.20½	.22
No. 3½ color, 750 vis., pale oil	.25½	.27	.25½	.27	.25½	.27
No. 1½ color, 150 vis., filtered	.22	.23½	.22	.23½	.22	.24
No. 2 color, 200 vis., pale, filtered	.24	.25½	.24½	.26	.24½	.26
No. 3 color, 300 vis., pale, filtered	.28	.30	.28½	.30	.28½	.30
No. 3½ color, 500 vis., pale, filtered	.32	.33	.32	.34	.32	.34
No. 3½ color, 750 vis., filtered	.34	.41	.39	.41	.39	.41
No. 5 to 6 color, 200 vis., red oil	.13½	.15	.13½	.15	.13½	.15
No. 5 to 6 color, 300 vis., red oil	.15½	.17	.15½	.17	.15½	.17
No. 5 to 6 color, 500 vis., red oil	.18	.19½	.18	.19½	.18	.19½
No. 5 to 6 color, 750 vis., red oil	.23	.24	.23	.24	.23	.24
No. 5 to 6 color, 1200 vis., red oil	.27	.28	.27	.28	.27	.28
No. 5 to 6 color, 2000 vis., red oil	.33	.34	.33	.34	.33	.34
CALIFORNIA—						
Pale Neutrals:						
200 vis., 2½-3 color	.13	.15½				
300 vis., 3 -4 color	.14	.17½				
350 vis., 3½-4 color	.16	.18½				
400 vis., 4 -4½ color	.19	.20				
Red Neutrals:						
200 vis., 4½-5 color	.13½	.14½				
300 vis., 5 -6 color	.13	.16½				
400 vis., 5 -6 color	.15	.17½				
500 vis., 6 -6½ color	.15½	.16½				
600 vis., 6 -6½ color	.16	.19				
700 vis., 6½ plus	.18					

*At Warren, Penn. †At New York City.

NEW YORK DOMESTIC MARKET

	April 22	April 15	April 8
Motor Gasoline:			
Greater New York, in steel barrels	.20	.20	.20
New York State outside Greater New York and New England, tank wagon	.20	.20	.20
New Jersey, tank wagon	.19½	.19½	.19½
Gasoline in bulk, delivered at N. Y.	.15½	.16½	.16½
V. M. P. Naphtha, in steel barrels	.19	.19	.19
Kerosene:			
Greater New York, tank wagon	.15	.15	.15
New York State outside Greater Nek York and New England, tank wagon	.15	.15	.15
New Jersey tank wagon	.14	.14	.14
Lubricating Oil (Industrial) at refinery:			
Bayonne, N. J.:			
Cylinder, extra light filtered, in barrels	.40½	.40½	.40½
Cylinder, light filtered, in barrels	.36½	.36½	.36½
Cylinder, Bright Stock	.48	.48	.48
Cylinder, steam refined (600)	.26½	.26½	.26½
Black, in bulk	.13½	.13½	.13½
Bloomless, white, 30-31 gravity, 170 ivs.	.47	.47	.47
Bloomless, 885 specific gravity	.14½	.14½	.14½
Red Paraffin:			
170 viscosity	.20	.20	.20
212 viscosity	.22	.22	.22
265 viscosity	.24	.24	.24
295 viscosity	.27	.27	.27
Paraffin, 903 specific gravity	.24½	.24½	.24½
*Fuel Oil:			
Bunker Oil, 14 plus, delivered in barges, bbl.	1.75	1.75	1.60
Diesel Oil, at refinery, gallon	.05	.05	.05
Furnace Oil, tank wagon, gallon	.10	.10	.10
Gas Oil, delivered in New York	.05½	.05¼	.05¼
Wax, fully refined:			
120-122 a.m.p.	.04½	.04½	.04½
125-127 a.m.p.	.04¾	.04¾	.04¾
130-132 a.m.p.	.05	.05	.05
135-137 a.m.p.	.05½	.05½	.05½

*Lighterage, 6.5c a barrel extra.

NEW YORK EXPORT PRICES

	April 22	April 15	April 8
Motor Gasoline, in cases, gallon	.28.15	.28.15	.28.15
Motor Gasoline, U. S. Navy, spec. gallon	.14	.14.25	.14.25
Naphtha, 60° F., 59-61 spec. grav	.15.25	.16.0	.16 0
Naphtha, 60° F., 63-66 spec. grav.	.17	.18.0	.18.0
Naphtha, 60° F., 66-68 spec. grav.	.18.50	.19.50	.19.50
Kerosene:			
Standard white, in bulk, gallon	.06½	.07	.07
Standard white, in barrels, gallon	.13½	.14	.14
Standard white, in cases, gallon	.16.9	.17.15	.17.15
Water white, in cases, gallon	.07½	.08	.08
Water white, in barrels, gallon	.14½	.15	.15
Water white, in cases, gallon	.18 5	.18.5	.18.5

LOS ANGELES EXPORT PRICES

Kerosene:	
Water white export	.04½ .05

CRUDE OIL PRICES

Arkansas and North Louisiana

Caddo, 38° and above	$1.85
35° to 37.9°	1.75
32° to 34.9°	1.65
Below 32°	1.50
Homer, 35° and above	1.85
33° to 34.9°	1.75
31° to 32.9°	1.65
Below 31°	1.50
Haynesville, 33° and above	1.75
Below 33°	1.65
El Dorado, 33° and above	1.85
Below 33°	1.75
Bull Bayou, 38° and above	1.80
35° to 37.9°	1.65
32° to 34.9°	1.50
De Soto	1.85
Crichton	1.65
Bellevue	1.75
†Smackover, 26° and above	1.35
25° to 25.9°	1.20
24° to 24.9°	1.10
Below 24°	1.00
†The Texas Co. prices, same except—	
Smackover, below 24°	.85
*Stephens, Ark.:	
Below 23°	1.00
23° to 25.9°	1.20
26° to 27.9°	1.35
28° to 31°	1.40

*Posted by Atlantic Oil Producing Co.

Wyoming and Montana

Rock Creek (Wyo.)	$1.70
Salt Creek	1.60
Big Muddy	1.50
Mule Creek	1.10
Gross Creek (light)	1.95
Elk Basin	1.95
Lance Creek	1.90
Osage	1.90
Cat Creek (Mont.)	1.95
Sunburst (Mont.)	1.65
Lost Soldier	1.28
Greybull and Torchlight	1.95
Hamilton Dome	1.55

Lander based on contracts covering entire production of fields.

Oklahoma, Kansas, North and Central Texas

Prairie Oil & Gas Co. and other major purchasing companies except as noted below:

Below 30°	$1.25
30° to 32.9°	1.45
33° to 35.9°	1.75
36° to 38.9°	2 00
39° and above	2.25
Magnolia Petroleum Co.:	
Below 28°	1.00
28° to 30.9°	1.20
31° to 32.9°	1.45
33° and above, same as Prairie.	
Corsicana Light	2.00
Corsicana Heavy	1.00
Mexia	2.00
Currie	2.25
Powell	2 00
Thrall	1.00

Gulf Coast

Grade "A"	$2.00
Grade "B"	1.70
Luling	1.23
Laredo	.80
Milam County	1.35
Rockdale-Minerva (Milam Co.)	1.60
Above 39° gravity	2.25
Calliham (Live Oak-McMullen Co.)	1.00

California

14° to 14.9°	$1.00
20° to 20.9°	1.01
21° to 21.9°	1.02
22° to 22.9°	1.03
23° to 23.9°	1.05
24° to 24.9°	1.07
25° to 25.9°	1.10
26° to 26.9°	1.13
27° to 27.9°	1.16
28° to 28.9°	1.19
29° to 29.9°	1.22
30° to 30.9°	1.25
31° to 31.9°	1.28
32° to 32.9°	1.31
33° to 33.9°	1.34
34° to 34.9°	1.37
35° gravity and above	1.40

Eastern States

Penna Grade Oil in New York Transit Lines	$4.50
Bradford District Oil in National Transit Lines	4.50
Penn Grade Oil in National Transit Lines	4.00
Penna Grade Oil in Southwest Pa. Pipe Line Lines	4.00
Penna Grade Oil in Eureka Pipe Line Lines	4.00
Penna Grade Oil in Buckeye Pipe Line Lines	4.00
Cabell Grade Oil in Eureka Pipe Line Lines	2.20
Corning Grade Oil in Buckeye Pipe Line Lines	2.15
Somerset Medium Oil in Cumberland Pipe Line Lines	2.30
Somerset Light Oil in Cumberland Pipe Line Lines	2.50
Ragland Grade Oil in Cumberland Pipe Line Lines	1.10
Lima	2.28
Wooster	2.15
Illinois	2.07
Indiana	2.08
Princeton	2.07
Plymouth	1.45
Waterloo	1.53
†Oil Springs, Canada	2.75
†Petrolia, Canada	2.68
Western Kentucky (light), (Indian Refining Co.)	2.36
Western Kentucky (heavy) (Indian Refining Co.)	2.16
Warren and Simpson Counties (Ky.) (Paragon Dev. Co.)	2.30
Cumberland and Monroe Counties, (Ky.), (Paragon Dev. Co.)	2.50

†Plus Government bounty of 52½c.

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MEMBER AUDIT BUREAU OF CIRCULATION

TEST IT YOURSELF

Next time you drive up to a filling station ask the attendant a few questions about the price of gasoline and see for yourself how much or how little information he gives the inquiring customer.

If, as is most likely, you run across "salesmen" such as representatives of The Oil and Gas Journal encountered in various parts of the country, you will begin to think it time the oil industry was better represented in its contact with the public.

You may discover why the gasoline buyer thinks as so many do about your business. You may find an explanation why wrong-headed notions about our industry stick so long in the popular mind, and why so many people are ready to vote for politicians who make a specialty of denouncing the oil business.

It may have seemed to you that anybody can sell gasoline. Anybody can work a pump and fill a tank but selling gasoline is something more. Has it occurred to you that perhaps one reason why there are so many varieties of pump stations may be the hope of gasoline buyers that a new station may be different?

If the stations were manned by gasoline salesmen instead of mere attendants; if customers were attracted to come again by courteous friendliness inviting confidence; if their natural curiosity about the variance in prices was intelligently satisfied, it seems likely that there would be less shopping around for "gas," fewer unnecessary stations and a great deal better feeling towards the oil industry.

The report of the tests made by representatives of The Oil and Gas Journal, published elsewhere in this issue, showing what sort of answers the public gets at filling stations to perfectly natural and legitimate inquiries by customers for our chief product may well startle thoughtful oil men.

The Oil and Gas Journal has the names of these stations but does not wish to pillory them publicly. They are not small, hole-in-the-wall concerns but include the largest marketing companies. We will be glad to furnish this information to companies interested. But they ought to send out their own representatives and test it for themselves. They will find the same results, practically everywhere. There are, of course, noteworthy exceptions but so rare as not to alter the general public effect.

It is a situation simple to overcome. A satisfied public, understanding the difficulties and necessities of maintaining its supply of motor fuel would cheerfully pay a higher price where, uninformed and dissatisfied, even with a lower price, it would keep on damning the industry. A great national campaign to get right with the public through the service stations is the remedy. It is not a question of cost. The industry would be better off even if it had to raise the price of gasoline to do it.

A cent a gallon added would give $60,000,000 a year; half a cent $30,000,000. Nothing like that is needed. Three or four millions spent in a nation-wide movement would do more to establish the industry in the good will of the country than anything imaginable. It would get results that would forestall vastly greater losses from outside attacks.

As a business proposition investors in the industry, considering its special hazards, are entitled to a better return. They should get more for their money because of the risks they take. Gasoline, compared to any other product, is too cheap. It would be better for the public, too, if the price were stabilized, avoiding the violent fluctuations between panic and famine conditions.

With the public understanding the truth about oil the industry could make a stand and fight its foes in Congress and politics. It could demand a showdown with every confidence in the popular verdict. It is worth the effort.

The representatives of The Oil and Gas Journal were instructed to record faithfully the actual answers received to the four questions. The humor in some of the replies was not injected by them but came from the filling stations themselves. It is not a situation to be joked about, but a very serious matter involving billions of dollars invested in the industry and the livelihood of millions dependent upon its prosperity.

It is a revelation of the lackadaisical manner in which the public is treated when it asks for information from the only representatives of the oil business with whom it comes into direct touch. This example of the tail wagging the dog, of the country's second greatest industry putting its worst foot foremost in meeting its customers must be shocking to every business instinct.

The biggest thing the heads of marketing organizations could do would be to tackle this condition. Nothing could be more essential to their branch of the business than the establishing of better relations between the industry and the public.

The Oil and Gas Journal has been glad to hear that officials of oil associations have been meeting to discuss this question. Even in meeting to discuss it there is the hope of action, of getting down to constructive work.

Getting together is in itself a fact for congratulations, offering for the first time, as so often suggested in these columns, direct contact between producers, refiners and marketers as members of one big industry, all for one and one for all.

These discussions should lead to understanding and the selection of some central body under the leadership of the Petroleum Institute to take charge of the movement. The leaders in the industry stand ready to join in any expense necessary if only some definite steps are taken for energetic effort.

DRESSER COUPLINGS

Each installation is considered individually—and gaskets, that are impervious to the particular fluid to be carried in the line, are furnished.

Dresser Couplings are preferable on all kinds of Pipe Lines. They are strong, flexible and durable; will stand any pressure the pipe will carry; take care of expansion and contraction in the line, and remain permanently tight.

DRESSER COUPLINGS DOMINATE

S. R. DRESSER MANUFACTURING CO.

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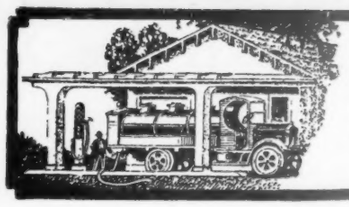


TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, April 22

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

Main Service Station Price

	Gasoline Tank wagon	Gasoline Incids tax	Gasoline Service of station	Kero Tank wagon
Chicago district 1 to 99 gallons	18.0	..	20.0	12.0
100 to 199 gallons				18.0
Above 200 gallons				16.0
				15.25

Tank wagon prices on April 10, 1922, g. up 1½c; May 8, g. up 1c; June 27, both up 1c; July 19, g. down 2c; k. down 1c; Oct. 10, g. down 2c; Oct. 31, g. down 1c; Feb. 5, 1923, g. up 1c; Feb. 20, g. up 1c; Aug. 14, g. down 6.6c; Oct. 4, k. down 1½c; Nov. 10, g. down 1.4c; Dec. 29, g. up 2c; Jan. 12, 1924, g. up 2c; k. up 1c; Feb. 5, g. up 2c, k. 1c.

Decatur, Ill.	18.2	..	20.2	12.5
East St. Louis	17.1	..	19.35	11.6
Joliet	18.4	..	20.4	12.7
Peoria	18.2	..	20.2	12.5
Quincy	18.2	..	20.2	12.3
Davenport, Ia.	18.5	..	20.5	12.9
Des Moines	18.5	..	20.5	12.9
Keokuk	18.5	..	20.5	12.9
Sioux City	18.1	..	20.1	12.5
Duluth, Minn.	19.2	..	21.2	13.6
Minneapolis	18.9	..	20.9	13.6
La Cross, Wis.	19.2	..	21.2	13.4
Milwaukee	18.1	..	20.1	12.2
Madison	18.3	..	20.3	12.5
Detroit, Mich.	18.8	..	20.8	13.2
Grand Rapids	18.7	..	20.7	13.1
Saginaw	18.9	..	20.9	13.3
Evansville, Ind.	20.0	2.0	22.0	12.5
Fort Wayne	20.4	2.0	22.4	12.9
Indianapolis	20.2	2.0	22.2	12.7
South Bend	20.4	2.0	22.4	12.9
Fargo, N. D.	20.6	1.0	22.6	15.6
Huron, S. D.	22.0	2.0	24.0	14.1
Sioux Falls	21.5	2.0	23.5	13.6
*Kansas City	18.9	1.0	20.9	11.3
Springfield	17.8	..	19.8	12.2
*St. Louis	17.6	.5	19.9	12.0
*St. Joseph	18.3	.5	20.3	12.2
Wichita, Kans.	17.8	..	19.8	11.8
Bartlesville, Okla.	19.4	2.5	21.4	10.9

*City tax.

PENNSYLVANIA-DELAWARE AND PART NEW ENGLAND

Atlantic Refining Co.

	Gasoline Tank wagon	Gasoline Incids tax	Gasoline Service of station	Kero Tank wagon
*Pittsburgh, Pa.	20.0	..	25.0	14.0
*Philadelphia	20.0	..	25.0	14.0
*Scranton	20.0	..	25.0	14.0
*Allentown	20.0	..	25.0	14.0
*Altoona	20.0	..	25.0	14.0
Dover, Del.	22.0	2.0	25.0	14.0
Wilmington	22.0	2.0	25.0	14.0
Providence, R. I.	20.0	..	23.0	14.0
Springfield, Mass	20.0	..	23.0	14.0
Worcester	20.0	..	23.0	14.0
Boston	20.0	..	23.0	14.0
Hartford, Conn.	21.0	1.0	24.0	14.0
New Haven	21.0	1.0	24.0	14.0

*Pennsylvania tax of 2 cents is collected by the dealer and paid by him direct to the State.

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline Tank wagon	Gasoline Incids tax	Gasoline Service of station	Kero Tank wagon
Atlanta, Ga.	22.0	3.0	26.0	14.0
Augusta	24.0	3.0	26.0	14.5
Macon	24.0	3.0	26.0	16.5
Savannah	22.0	3.0	24.0	14.0
Birmingham, Ala.	22.0	2.0	24.0	15.5
Mobile	21.0	2.0	23.0	13.5
*Montgomery	23.0	3.0	26.0	16.5
Clarksdale, Miss	20.0	1.0	22.0	14.0
Jackson	20.0	1.0	22.0	11 0
Natchez	19.5	1.0	21.5	13.5
Vicksburg	19.5	1.0	21.5	13.5
Jacksonville, Fla.	22.0	3.0	24.0	14.0
Miami	24.0	3.0	26.0	16.5
Pensacola	22.0	3.0	24.0	14.5
Tampa	22.0	3.0	24.0	14.0
Covington, Ky.	21.0	1.0	23.0	15.0
Lexington	21.0	1.0	23.0	15.0
Louisville	20.0	1.0	22.0	14.0

*In addition to State tax of 2 cents on gasoline, Montgomery has city tax of 1 cent on gasoline and ½ cent on kerosene.

PACIFIC COAST DISTRICT

Standard Oil Co. (California)

	Gasoline Tank wagon	Gasoline Incids tax	Gasoline Service of station	Kero Tank wagon
San Francisco	17.0	2.0	20.0	15.5
Los Angeles	16.0	2.0	19.0	16.5
Fresno	17.5	2.0	20.5	17.5
Reno, Nev.	20.5	2.0	23.5	19.0
Portland, Ore.	19.0	3.0	22.0	16.5
Seattle, Wash.	18.0	2 0	21.0	16.5
Tacoma	18.0	2.0	21.0	16.5
Spokane	22.0	3.0	25.0	20.5
Phoenix, Ariz.	23.0	3.0	26.0	21.5

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline Tank wagon	Gasoline Incids tax	Gasoline Service of station	Kero Tank wagon
Denver, Colo.	21.0	2.0	23.0	14.5
Glenwood Spgs.	25.0	..	....	18.5
Pueblo	21.0	..	....	14.5
Billings, Mont.	23.5	2.0	25.5	16.5
Butte	25 0	2 0	27.0	17.0
Great Falls	25.0	2.0	27.0	18.0
Helena	25.0	2.0	27.0	18.0
Miles City	24.5	2.0	26.5	17.5
Boise, Idaho	24.5	2.0	26.5	20.0
Salt Lake, Utah	24.0	2.5	26 0	17.5
Ogden	24.0	2.5	26.0	17.5
Basin, Wyo.	22.0	1.0	....	15.0
Casper	20.0	1.0	22.0	13.0
Cheyenne	21.5	1.0	23.5	15 0
Cody	23.0	1.0	....	16.0
Lander	22.0	1.0	26.0	15.0
Albuquerque, N. M.	24.0	1.0	26.0	17.5

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline Tank wagon	Gasoline Incids tax	Gasoline Service of station	Kero Tank wagon
Albany, N. Y.	20.0	..	23.0	14.0
*New York	20.0	..	22.5	15.0
Buffalo	18.5	..	21.5	15.0
Rochester	19.5	..	21.5	13.0
Syracuse	19.5	..	21.5	15.0
Boston, Mass.	20.0	..	22.5	15.0
Providence, R. I	20.0	..	23.5	15 0
Augusta, Me.	20.0	1.0	23.5	15.0
Manchester	20.0	1.0	23.5	15.0
Burlington, Vt.	20.0	1.0	23.5	15.0

*Price in steel barrels.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline Tank wagon	Gasoline Incids tax	Gasoline Service of station	Kero Tank wagon
New Orleans, La	17.5	1.0	20.5	9.0
Alexandria	18.5	1.0	21.5	13 0
Baton Rouge	17.0	1.0	20.0	11.5
Lake Charles	18.5	1.0	21.5	13.0
Shreveport	18.5	1.0	21.5	13.0
Memphis, Tenn.	20.0	2.0	22.0	14.0
Chattanooga	20.5	2.0	23.5	14.5
Knoxville	21.5	2.0	23.5	15.0
Nashville	19.5	2.0	20.5	13.5
Br'stol	22.0	2.0	24.0	15.5
Little Rock, Ark	21.0	4.0	23.0	13.0

OHIO

Standard Oil Co. (Ohio)

	Gasoline Tank wagon	Gasoline Incids tax	Gasoline Service of station	Kero Tank wagon
All Ohio Points.	20.0	..	22.0	15.0

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline Tank wagon	Gasoline Incids tax	Gasoline Service of station	Kero Tank wagon
Newark, N. J.	19.5	..	....	14.0
Atlantic City	19.5	..	....	14 0
Annapolis, Md.	21.0	2.0	24.0	13.5
Baltimore	21.0	2.0	24.0	13.5
Cumberland	21.0	2.0	24.0	13.5
Washington, D. C.	19.0	..	23.0	13.5
Norfolk, Va.	22 0	3.0	24.0	14.0
Petersburg	22.0	3.0	24.0	14.5
Danville	22.0	3.0	24.0	14.5
Richmond	22.0	3.0	24.0	14.5
Roanoke	22.0	3.0	24.0	14.5
Keyser, W. Va.	21.0	2.0	....	14.5
Charleston	21.0	2.0	....	14.5
Parkersburg	21.0	2.0	....	13.0
Wheeling	21.0	2.0	....	14.5
Charlotte, N. C.	22.0	3.0	....	14 5
Hickory	22.0	3.0	....	14.5
Mt. Airy	22.0	3.0	....	14.5
Salisbury	22.0	3.0	....	14.5
Charleston, S. C.	22 0	3.0	....	13.5
Columbia	22.0	3.0	24.0	14.5

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.

	Gasoline Tank wagon	Gasoline Incids tax	Gasoline Service of station	Kero Tank wagon
Dallas, Tex.	17.0	1.0	21.0	10.0
Fort Worth	17.0	1.0	21.0	11.0
Houston	17.0	1.0	21.0	12.0
San Antonio	16 0	1.0	18.0	10.0
El Paso	18.0	1.0	22.0	13.0
Muskogee, Okla.	20.5	2.5	23.5	13.0
Oklahoma City.	18.5	2.5	23.5	11.0
Tulsa	20.5	2.5	23.5	11.0
Ft. Smith, Ark.	18.0	4.0	22.0	13.0
Little Rock	22.0	4.0	25.0	13.0
Texarkana	21.0	4.0	24.0	13.0

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline Tank wagon	Gasoline Incids tax	Gasoline Service of station	Kero Tank wagon
Omaha	18 25	..	20.25	12.5
Crawford	19.00	..	.....	13.25
McCook	19.75	..	21.75	14.0
Norfolk	18.75	..	20.75	13.0
North Platte	19.75	..	21.75	13.75
Scotts Bluff	19.25	..	21.25	13.25

HUNTINGTON BEACH RULING

SAN FRANCISCO, Cal., April 19.—E. M. Daugherty, State Corporation Commissioner, will shortly issue an order refusing incorporation to oil companies in Huntington Beach Field at the maximum capitalization of $175,000 an acre now permitted in southern California. Issuance of order is expected by May 1. The action is based on an engineer's report and report of the State Mining Bureau that "due to close drilling, operation of small companies in this field with few exceptions have been unprofitable" and that the field "is practically drilled up." The engineers' report showed that whereas 149 wells in Huntington Beach on April 15, last year, produced 124,000 bbls. a day, 50 additional wells finished by July 12, resulted in an increase of only 3,000 bbls. daily.

TANK WAGON CHANGES

April 15.—Magnolia Petroleum Co. reduced gasoline tank wagon 1 cent in Oklahoma City.

April 17.—All grades New York export kerosene were reduced ½-cent per gallon by Standard Oil Co. (New Jersey).

April 19.—Magnolia Petroleum Co. reduced gasoline tank wagon price 1 cent and service station price 2 cents at San Antonio.

April 21.—Standard Oil Co. (New Jersey) reduced New York export gasoline ¼-cent to 1 cent per gallon.

S. G. BAYNE, BANKER AND OIL MAN IS DEAD

NEW YORK, April 20.—Samuel Gamble Bayne, pioneer oil operator and chairman of the board of the Seaboard National Bank, died today at the age of 79.

Mr. Bayne, a native of Ireland, came to this country in 1869 and soon afterward purchased the sugar house oil well near Titusville, Pa., the second oil well drilled in the United States. He formed the oil well supplies firm of Bayne, Wilson & Pratt which developed into the National Supply Co.

Mr. Bayne was listed as one of the 31 shareholders who owned more than one-half of the Standard Oil Co.'s issue before the concern was dissolved.

Mr. Bayne was for 8 years president of the Security Oil Co. of Texas.

HIGHER GASOLINE RECOVERY

In the advertisement of the Chestnut & Smith Corp. on page 95 of this issue, the recovery of Grade "A" natural gasoline should read "not less than 90 per cent," instead of "not less than 78 per cent." This change should be made in the advertisement when it is cut out and placed under the glass on a desk or other place for ready reference as was suggested by the Chestnut & Smith Corp.

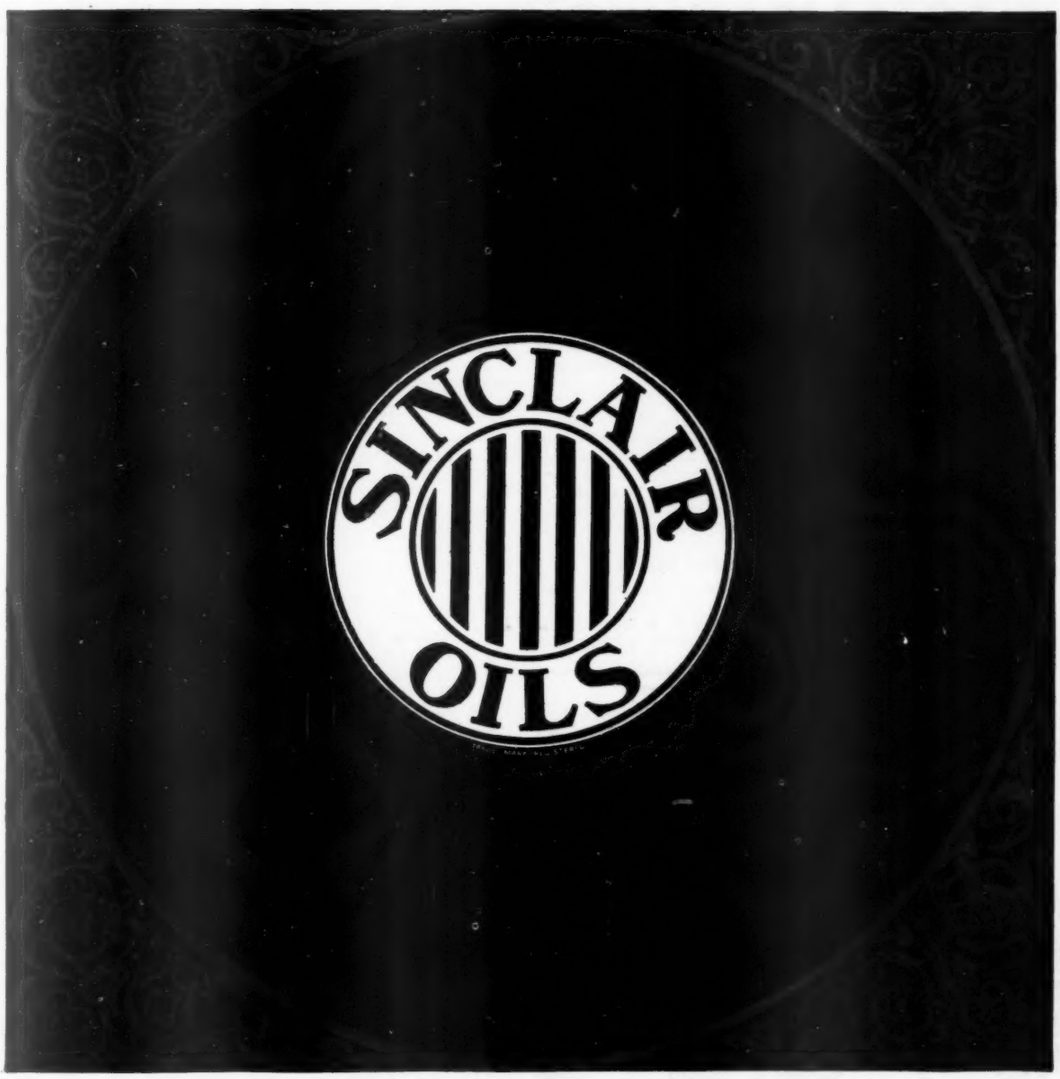
MID-CONTINENT REFINERY OPERATIONS, APRIL 12

An increase of 139,940 bbls., or 6.83 per cent, in oil run to stills by Mid-Continent refiners was reported by the Western Petroleum Refiners' Association, for the week ended April 12. A total of 143 refineries with a capacity of 535,400 bbls. made the report. An increase of 151,829 bbls. in crude oil run to stills was registered, while there was a decrease of 11,889 bbls. in the semi-refined oils run from stocks. The increase in the output of gasoline was negligible, advancing from an output of 26,072,922 gallons for the week previous to 26,127,835 gallons for the week in review, an increase of 54,913 gallons, or 0.21 per cent. During the week shipments of gasoline declined 31.79 per cent and as a result stocks of gasoline climbed from 179,000,870 gallons to 185,857,648 gallons, an increase of 6,856,772 gallons, or 3.83 per cent. A decrease of 805,816 gallons was reported in the output of kerosene, amounting to 12.74 per cent. Shipments during the week increased 6.85 per cent, with the result that stocks of kerosene fell from 25,503,496 gallons to 24,977,464 gallons, a drop of 616,032 gallons, or 2.41 per cent. The stocks of gas and fuel oils climbed from 114,891,969 gallons to 124,295,761 gallons, an increase of 9,403,792 gallons, or 8.18 per cent, due to the increase in output from 35,330,863 gallons to 42,060,926 gallons, which is 6,730,063 gallons, or 19.05 per cent, and a decrease of 24.34 per cent in the shipments during the week. Crude oil stocks showed a drop of 350,332 bbls., or 4.27 per cent, while semi-refined oils in stock showed an increase of 102,687 bbls., or 5.05 per cent.

CONSOLIDATED STATEMENT COVERING ALL REPORTING REFINERIES FOR THE WEEK ENDING 7 A. M., APRIL 12, 1924

	Kansas	Oklahoma	Texas	Louisiana-Arkansas	Total	Week End. Apr. 5, '24	Week End. Mar. 15, '24	Week End. Feb. 16, '24
Number of refineries reporting	28	62	44	12	143	142	139	138
Daily capacity of stills (bbls.)	85,100	266,700	137,400	46,200	535,400	537,550	535,450	533,850
Combined operations during week:								
Materials to stills (bbls.):								
Crude, Item A	272,336	651,123	647,156	103,030	1,873,643	1,721,814	1,857,491	1,718,781
Other oils (see note), item B	32,406	161,390	93,983	28,261	316,040	326,929	430,159	364,147
Total	304,742	1,012,512	740,138	131,291	2,188,683	2,048,743	2,287,650	2,082,928
Output of finished products (gals.):								
Gasoline, Item C	4,267,126	14,307,642	6,353,054	1,200,013	26,127,835	26,072,922	26,989,505	24,346,673
Kerosene, Item D	1,435,215	2,658,834	1,160,951	266,665	5,521,665	6,327,481	6,801,295	6,916,501
Gas and fuel oil, item E	5,550,463	16,744,705	17,363,829	2,411,930	42,060,926	35,330,863	41,049,249	36,066,794
Stocks on hand at close of week:								
Materials for stills (bbls.):								
Crude, Item J	844,720	4,762,602	1,223,252	1,017,179	7,847,754	9,198,086	8,095,098	7,151,581
Other oils (see note), item K	85,118	1,188,244	262,113	600,492	2,135,967	2,033,280	2,236,260	2,188,339
Finished products (gals.):								
Gasoline, Item L	17,647,127	109,893,133	50,899,355	7,918,023	185,857,648	177,760,876	166,572,184	135,142,306
Kerosene, Item M	1,517,566	13,327,296	9,615,274	1,517,328	24,977,464	25,593,496	24,360,604	21,739,271
Gas and uel oil, Item N	7,983,064	53,570,065	50,134,446	12,608,187	124,295,761	114,891,969	125,769,137	115,394,700

Note: Other oils includes all oils other than crude which are either purchased or withdrawn from stocks and run to stills during the week. The total of items A and B is, therefore, the net quantity of materials consumed by the reporting refineries in producing the quantities of products shown as the result of the operation of the refineries during the week. Item K includes all stocks of oils other than crude, held for further refining.



WHEN you select oils that carry the Sinclair trade-mark, you are assured of Sinclair quality — a quality that is unsurpassed, at prices that are fair always.

SINCLAIR REFINING COMPANY

New York: Sinclair Oil Bldg., 45 Nassau St. Chicago: 111 West Washington St.

Cable Address: "Lucent"

SINCLAIR OILS

INQUIRY SHOWS WHY PUBLIC IS PREJUDICED

(Continued from Page 25)

take your telephone out. It's the same with gasoline."

2. "Because of a price war. There was an overproduction and a lot of independents built refineries to compete with the Standard and cut the price. But the Standard froze them out. They didn't last very long."

3. "Due to transportation charges, duties, etc., I guess."

4. "The price of gasoline seems to be influenced by the crude oil market. I watch crude oil quotations and if they rise 4 or 5 times in succession I'm pretty sure gas will go up a cent or two. I'd like to see gasoline cheap all the time. Then I'd have less of an investment involved and would make my profit just the same."

In the World's Oil Capital

By C. O. Willson and A. M. Rowley

TULSA, Okla., April 22.—Even in Tulsa, the oil capital of the world, filling station attendants were unable to answer the questions. When it is considered that probably more persons in Tulsa are engaged in the oil business than in any other line of work, the ignorance of the filling station attendants is the more appalling. In regard to question No. 3, it was asked in relation to the difference in price of gasoline in Oklahoma and in Kansas, Oklahoma having a 2½ cent tax on gasoline and Kansas not having any. Following are answers received:

1. "I don't know, sir."

Q. "Well, there should be some good reason for their raising the price as much as they have. It is 11½ cents more now than it was last December?"

A. "Well, when it was 12 cents last December, it was below the average. I guess they are trying now to even up."

2. "I don't know."

3. "I don't know.

4. "I can't tell you. Us fellows around here don't know anything about prices. We don't know as much as the person on the outside. The company never tells us anything. All it does is to tell us what to get for the gas and we either have to get that price or else."

At Another Station

Question—"Why did you raise gasoline 1½ cents the other day?"

Answer—"Darned if I know. (The advance was due entirely to the action of the Oklahoma State Legislature which raised the gasoline tax from 1 to 2½ cents.)

The filling station attendant then volunteered the information that "she is going up again soon, too."

Question—"Why?"

Answer—"Don't ask me."

Pretty Hard on Kansas

Question—"Why did you raise gasoline 1½ cents the other day?"

Answer—"Don't know."

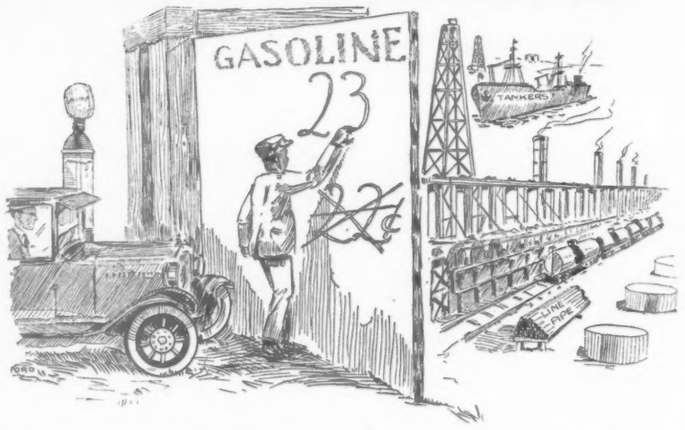
Question—"Why is it that I can buy gasoline 2 to 3 cents cheaper in Kansas than I can here in Tulsa?"

"I couldn't answer that, brother. A man ought to have something for living in Kansas."

Chiefly "I Don't Know"

1. "I don't know."
2. "Dogged if I know."
3. "Well, there is a tax in this State of 2½ cents a gallon."
4. "It beats me. I can't tell you."

ALL THE MOTORIST IS ABLE TO SEE



By Vern T. Whitney

BOWLING GREEN, Ky., April 19.—Kerosene is not the only illuminating product of the industry. Witness the following from the representatives of the filling stations and, in some cases, representatives of the refining companies themselves.

Col. J. C. Sibley, Jr., president of the JCS Oil Corp. and vice-president of the Oil Producers' League, has come out of the sticks for his weekly bath, and was week-ending in Bowling Green. Because of his keen appreciation of humor, but more especially because of his veracity and general dependability, the writer invited the colonel to accompany him as a witness both to the presentation of the following questions, and receipt of answers so termed.

The writer has the names of the various filling stations, brands of gasoline sold, etc., where representatives were interviewed, but in the name of Charity will lock them up within his heart, neither lose nor lend them. Four filling stations were visited. This is how they voted:

(If the answers are not verbatim, it is merely because of a lapse of memory occuring between the time the station was left and the corner was rounded where, unnoticed, the answers could be jotted down.)

Precinct 1

1. "Don't know."
2. As above.
3. "Doggoned if I know, but I expect they want to make money."
4. "Can't tell."

Precinct 2

1. "Search me."
2. "Damfino."
3. "You tell me. Different prices different places in the same State. State tax, grafting politicians, money don't go on roads," etc.
4. "Well, just whenever John D. Rockefeller needs some money. You take it now that spring's coming, Mr. Rockefeller will want a new suit of clothes, and gasoline will go up."

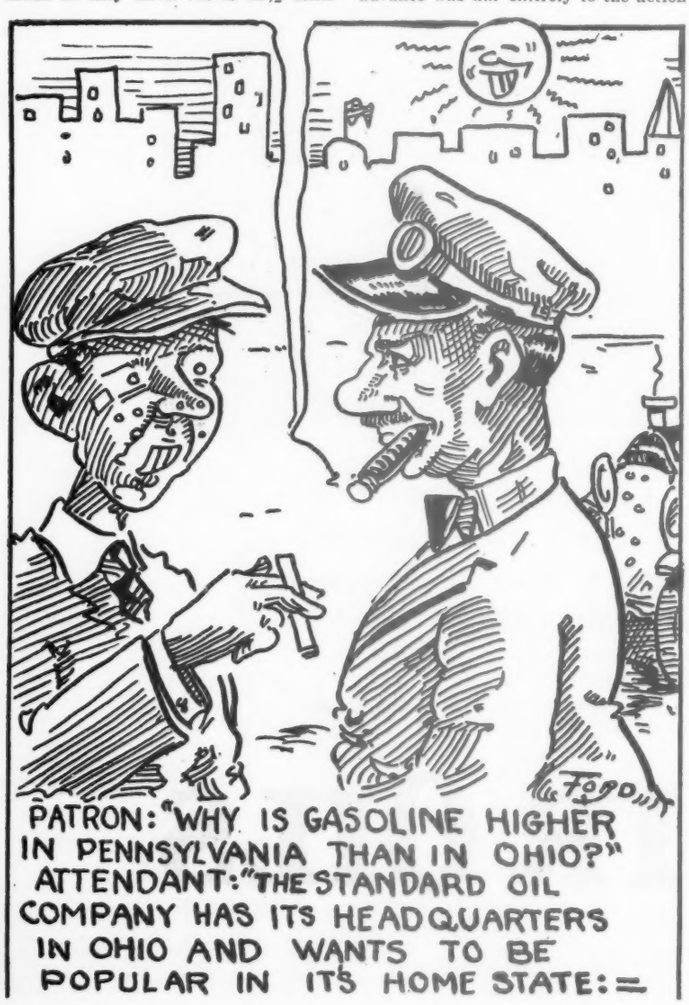
Precinct 3

1. "Don't know. * * * Of course crude's a little higher."
2. I could have sold it lower myself if I hadn't patronized local refineries. Topping plants sold out because they couldn't make money."
3. "Don't know. Consensus of opinion has been that Standard of Indiana has been cutting at Standard of Kentucky."
4. "Gas usually follows crude oil."

Precinct 4

1. "Rise in the price of crude."

(Continued on Page 120)


PATRON: "WHY IS GASOLINE HIGHER IN PENNSYLVANIA THAN IN OHIO?"
ATTENDANT: "THE STANDARD OIL COMPANY HAS ITS HEADQUARTERS IN OHIO AND WANTS TO BE POPULAR IN ITS HOME STATE:="
FOGDOG

THE MAN AT THE CROSS ROADS

IGNORANCE OF OIL INDUSTRY AND MISUNDERSTANDING OF CONDITIONS ENTERING INTO PRICE ADJUSTMENTS
CORRECT UNDERSTANDING OF PROBLEMS OF PRODUCING, REFINING AND MARKETING OF PETROLEUM AND ITS PRODUCTS.
THIS ROAD
THIS ROAD

Upholding the Industry

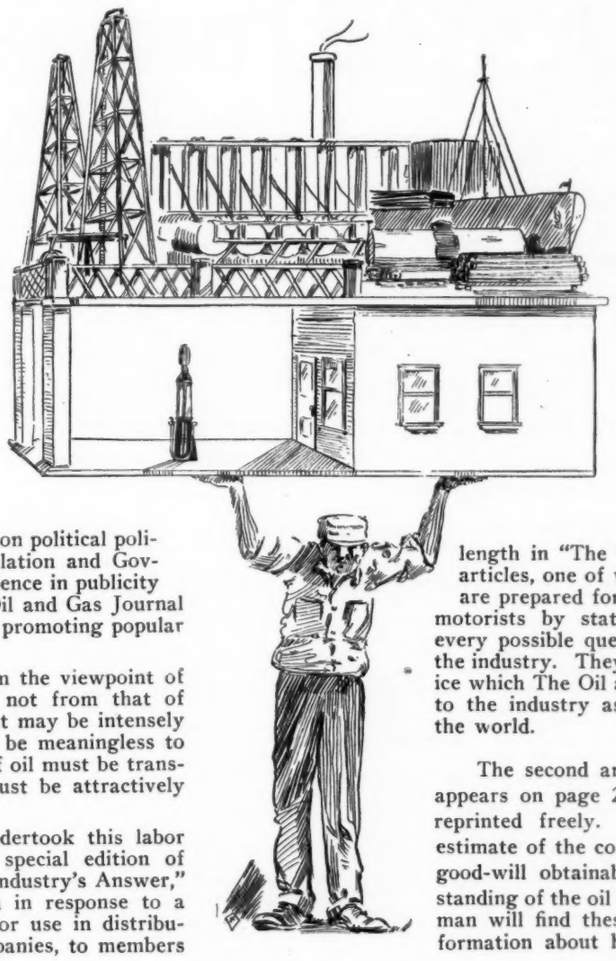
A Trade Publication which merely prints the news of the industry or business falls far short of complete success.

It should provide a forum for the discussion of the problems of the trade, for the ventilation of suggestions for the advancement of the industry.

In any movement for the general welfare of the business it should so far as possible lend its aid in stimulating interest and urging cooperation.

The Oil and Gas Journal has been that sort of Trade Publication. It has not confined itself to the reporting of news in the most complete and authoritative manner. It has studied every angle of the industry and sought continuously to promote a sense of unity in effort for the common good.

It has taken counsel with recognized leaders of each branch of the business, has made their problems its own and has labored tirelessly to help in their solution.



In the matter of relations with the public, vital to the industry because of the effect upon political policies and the agitation for regulation and Government control, years of experience in publicity have enabled the staff of The Oil and Gas Journal to indicate effective methods of promoting popular understanding.

This must be approached from the viewpoint of the man outside the industry, not from that of those within it. The details that may be intensely interesting to those inside may be meaningless to the general public. The story of oil must be translated into popular language, must be attractively and convincingly presented.

The Oil and Gas Journal undertook this labor and offered the result in its special edition of March 20 containing "The Oil Industry's Answer," now reprinted in booklet form in response to a general and insistent demand for use in distribution to stockholders of oil companies, to members of oil associations, as aids in the preparation of advertising and as information for attendants at filling stations upon whose contact with the public the popular impression of the entire industry depends.

Upon the shoulders of these men rests the welfare of the whole business because popular sentiment is very largely made by the impression received from personal contact with any institution or business. What the politicians may do or attempt to do to the oil business will result mainly from the understanding or misunderstanding the public receives from the attitude of the attendants at the filling stations with whom it does business.

So convinced are we that this education of the public through the service stations is the most effective method of getting the industry right with the people that The Oil and Gas Journal is now publishing a series of "Short Talks With Motorists," based on phases treated at length in "The Oil Industry's Answer." These articles, one of which is published in each issue, are prepared for use as leaflets to be handed to motorists by station attendants and will cover every possible question the public may ask about the industry. They are offered as part of the service which The Oil and Gas Journal believes it owes to the industry as the leading oil publication of the world.

The second article, "Musings of a Motorist," appears on page 20 in this issue. They may be reprinted freely. Any printer will furnish an estimate of the cost, insignificant compared to the good-will obtainable by a better popular understanding of the oil business. Incidentally, every oil man will find these articles worth reading as information about his industry. Watch for them.

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North Louisiana-Arkansas

By M. L. Vaughn

Production reaches peak for year in both North Louisiana and Arkansas fields. Norphlet still gains. Federal Petroleum Co.'s Nos. 1 and 2 Stocks, Union County, flowing 1,500 bbls. each; Hickman and others' No. 1 Hays flows 3,000 bbls. Gulf Refining Co. completes No. 215 Ferry Lake.

SHREVEPORT, La., April 17.—A substantial increase in production is noted in both the North Louisiana and Arkansas Fields, last week's average registering the peak of production for the current year. Following the storm, the production of the field fell off nearly 10,000 bbls. a day. During the past week, this has been more than made up, the increase in the production of the two fields averaging 19,740 bbls., 15,925 bbls. in Arkansas and 3,815 bbls. in North Louisiana. Total production averaged 187,630 bbls. a day, distributed as follows:

North Louisiana	Last Week	This Week
Bellevue	5,475	5,600
Caddo light	7,800	7,850
Caddo heavy	2,800	2,810
Cotton Valley	700	765
De Soto and Red River	4,580	4,615
Elm Grove	1,010	940
Haynesville	11,900	15,900
Homer	8,600	8,200
Total	42,865	46,680
South Arkansas		
El Dorado	13,230	12,700
Nevada County	1,850	2,000
Smackover light	30,530	33,900
Smackover heavy	76,816	89,706
Stephens	2,600	2,650
Total	125,025	140,950
Total both fields	167,850	187,630
Increase, 19,740 bbls.		

The Pine Island district in Caddo Parish came back last week when the Texas Co. perforated the casing in an old well on the Caddo Mineral Lands Co. lease in Section 23-21-15 and got a 1,000-bbl. well at 1,350 feet. Immediately after the completion of this well, another well on the same lease suddenly increased its production from a 15 or 20-bbl. pumper to a flowing well with a capacity of 300 bbls.

Two new locations have been made in the Cotton Valley district, the Ohio Oil Co. for No. 3 Hodges in Section 15-21-10, and the Humble Oil & Refining Co. for No. 2 Babb, in Section 14-21-10. The Fortuna Oil Co. is rigging up to drill No. 1 Cox in Section 23-21-10.

Union County Completions

Seventeen producing wells were completed in the Union County area of the Smackover Field during the past week, two large gas wells and 15 oil wells, having an aggregate initial production of 10,300 bbls. Practically all the completions were made in the Norphlet district which is proving by far the most productive pool in the Arkansas Field.

Braswell and others completed No. 1 Moore in Section 19-16-15, flowing 225 bbls. at 2,067 feet.

Dale and others completed No. 1 Le Croy, Section 17-16-15, swabbing 150 bbls. at 2,109 feet.

Early Dean and others completed No. 2 Hays, Section 21-16-15, flowing 400 bbls. at 2,047 feet.

Eason and others completed No. 3 Murphy, Section 15-16-15, pumping 150 bbls. at 2,090 feet.

The Federal Petroleum Co. completed two of the best wells of the week on the Stocks lease in Section 20-16-15, No. 1 flowing 1,500 bbls. at 2,083 feet and No. 2 flowing 1,500 bbls. at 2,062 feet.

Hickman and others completed No. 7 Graves, in Section 3-16-15, making 40,000,000 feet of dry gas at 2,260 feet; No. 1 Hays, Section 21-16-15, flowing 3,000 bbls. at 2,059 feet and No. 2 Hays, Section 21-16-15, flowing 800 bbls. at 2,058 feet.

The Humble Oil & Refining Co.'s No. 1 Dumas, in Section 21-16-15, came in flowing 1,185 bbls. at 2,070 feet.

The Lion Oil & Refining Co.'s No. 5 G. F. Murphy, Section 18-16-15, made a 200-bbl. pumper at 2,056 feet.

Jim McMurray completed No. 1 Le Croy, Section 17-16-15, swabbing 10 bbls. at 2,120 feet.

The Preston Oil Co. completed No. 1 A. B. Cook, Section 16-16-15, making 35,000,000 feet of dry gas at 2,355 feet.

The Roxana Petroleum Corp.'s No. 3 J. R. Murphy, Section 15-16-15, made a 150-bbl. pumper at 2,008 feet.

The Sun Oil Co. completed No. 1 Wilson, Section 19-16-15, swabbing 200 bbls. at 2,110 feet.

Sutherland and others completed No. 2 Ballard, Section 21-16-15, flowing 500 bbls. at 2,050 feet.

The Weisman Oil Co.'s No. 2 Smith, Section 17-16-15, came in at 2,042 feet, swabbing 250 bbls.

Union County Drilling

A number of wells were started during the past week, many of them located in Section 24-16-16, and its vicinity. In that section the Lion Oil Refining Co. has derrick pattern on location for No. 1 Hedgewood; Phillips Petroleum Co. has derrick pattern on location for No. 1 Moore; Ramage and others set 10-inch casing at 70 feet in No. 1 Hedgewood; Olvey and others set 10-inch casing at 90 feet in No. 1 Hedgewood with rig up for No. 2; rig up for No. 1 Moore; The Texas Co. is drilling at 100 feet in No. 1 Hedgewood; Sure Oil Co. set 10-inch casing at 70 feet in No. 1 Smith; Woodley Petroleum Co. has rig up for No. 1 Alphin.

Anderson and others have rig up for No. 1 Billyew and swabbing to test 65 feet of broken sand at 2,085 feet in No. 2, Section 8-16-15; tested No. 1 S. D. Cook dry with a show of oil at 2,085 feet and now arranging to test 17 feet of sand at 2,095 feet, Section 17-16-15. The Arkansas Drilling Co. has derrick pattern on location for No. 1 Lewis Werner Sawmill Co., Section 1-16-7. J. E. Crosby, trustee, set 10-inch casing at 65 feet in No. 4 Scott, Section 19-16-15, and is bailing to test No. 5 Graves at 2,030 feet, Section 17-16-15.

The Arkansas Fuel Oil Co., drilling No. 2 Alphin from 1,986 to 1,991 feet, is waiting on standard rig with 1,300 feet of oil in the hole, Section 11-16-15; is down 100 feet in No. 2 LaGrone, Section 1-16-17, with derricks up for Nos. 3 and 4 and has rig up for No. 4 Smith, Section 18-16-15. Bond & Evans set 6-inch casing at 1,995 feet in No. 2 Williams and have rig up for No. 1 Scott, Section 19-16-15.

Bonderant and associates have completed contract for No. 1 Tuberville, and are waiting orders at 2,150 feet, Section 9-18-12. Braswell and others have derrick pattern on location for No. 2 Moore, Section 19-16-15. J. W. Clark has derrick pattern on location for No. 1 Hicks, Section 20-16-15. The Coker Drilling Co. has rebuilt derrick for No. 1 Thornton, Section 14-16-16.

Bernstein and others have taken over the wells of T. L. Cook and have rig up for No. 1 Bell, Section 21-16-15. Early Deal and others have rig up for No. 3 Hayes, Section 21-16-15. The Dunn Oil Co. is arranging to test 15 feet of sand at 2,040 feet in No. 2 Smith, Section 18-16-15. Dyer Brothers are down 1,900 feet in No. 1 Neely, Section 1-16-17.

Eason and others are building derrick for No. 1 Dumas, Section 28-16-15. Estes and others are waiting on standard rig to pump No. 2 Freeman at 2,255 feet, Section 1-16-17. The Federal Petroleum Co. set 10-inch casing at 85 feet in No. 3 Stocks and is down 1,260 feet in No. 4, formerly the Pure Oil Co.'s No. 1 Hicks, Section 20-16-15. Flemming and others have rig up for No. 1 Harrell, Section 21-16-15. W. H. Gilliland set 10-inch casing at 100 feet in No. 2 Hodges and set 10-inch casing at 85 feet in No. 1 Smith, Section 1-16-17.

Gulf Refining Operations

The Gulf Refining Co. has a number of wells under way. It is arranging to drill No. 3 Alphin deeper which was completed as a 25-bbl. pumper some time ago at 2,002 feet and has derrick up for No. 7, Section 11-16-15. It lost hole with a bad fishing job at 1,913 feet in No. 2 Flenniken and is pulling casing to abandon, Section 5-16-15. It made location for No. 1 Hicks, Section 23-16-16; is waiting on standard rig to pump No. 4 Jameson, Section 21-16-15; set 10-inch casing at 105 feet in No. 4 LeCroy, Section 16-16-15; waiting on standard rig to pump No. 7 Hardy Murphy at 1,998 feet with rig up for No. 8, and location made for No. 9, Section 3-16-15; and has 10-inch casing set at 110 feet in No. 17 L. Werner, Section 8-16-16.

Henderson and others have derrick up for No. 4 Smith, Section 18-16-15. Hickman and others set 10-inch casing at 65 feet in No. 1 Hicks, Section 20-16-15. The Higgins Oil & Fuel Co. set 6-inch casing at 1,955 feet in No. 2 Hicks, Section 20-16-15. Hoffmier and others set 6-inch casing at 1,935 feet in No. 1 Smith, Section 17-16-15. Hollyfield and others are waiting on standard rig to pump No. 6 Giller at 1,988 feet with 300 feet of oil in the hole, Section 11-16-15.

Holliday, trustee, has taken over the Goff lease of Knox and others and has rig up for No. 2 Goff, Section 6-16-16. The Houston Oil Co. has derrick pattern on location for No. 3 Ballard, Section 21-16-15. The Humble Oil & Refining Co. set 6-inch casing at 2,030 feet in No. 2 Dumas, Section 21-16-15; set 6-inch casing at 1,910 feet in No. 6 E. G. Murphy, Section 15-16-15; set 10-inch casing at 65 feet in No. 1 J. Hicks, Section 20-16-15; set 10-inch casing at 60 feet in No. 1 Moore with derrick pattern on location for No. 2, Section 19-16-15.

The Humphreys Oil Co. is waiting on standard rig to pump No. 2 L. Hicks, Section 20-16-15. Hunt and others are down 2,870 feet in No. 2 Lawton, formerly completed as a 75-bbl. well making 5,000,000 feet of gas at 2,031 feet, Section 10-16-15.

The Imperial Oil & Gas Co. has rig up for No. 3 Lawton, Section 7-16-15; is arranging to drill in No. 2 T. O. Murphy with tools at 2,098 feet, Section 7-16-15, and has derrick rebuilt for No. 1 Smith, Section 29-17-14.

The Jarman Drilling Co. is waiting on standard rig to pump No. 1 Neely with 1,200 feet of oil in the hole at 2,260 feet, Section 1-16-17. Kinnebrew and others are down 805 feet in No. 1 Williams, Section 3-16-15. Keen & Woolf are arranging to test 15 feet of sand at 2,070 feet in No. 3 Hinshaw, Section 17-16-15, and have a fishing job at 1,000 feet in No. 1 Bradford, Section 7-16-15. The Louisiana Texas Drilling Co. is swabbing to test 33 feet of sand at 2,000 feet in No. 2 Hays with rig up for No. 1, Section 2-16-15.

The Lion Oil & Refining Co. is down 1,520 feet in No. 2 Allgulf; down 30 feet in No. 3 with derrick up for No. 4, Section 17-16-15; has a derrick pattern on location for No. 1 Hedgewood, Section 24-16-16; had a bad fishing job at 2,250 feet in No. 1 Hardy Murphy and has moved the location 15 feet west with 12-inch casing set at 40 feet in second hole, Section 9-16-15; has rig up for No. 4 G. F. Murphy, Section 18-16-15; 6-inch casing set at 2,080 feet in No. 2 J. T. Murphy, Section 8-16-15.

Looney and others are building derrick for No. 1 Hicks, Section 20-16-15. Lamb and others have set 5¾-inch casing at 2,700 feet in No. 3 Cullins, Section 9-19-15. The Magnolia Petroleum Co. is down 2,645 feet in No. 1 Fagg, Section 8-16-16; set 6⅝-inch casing at 2,220 feet in No. 3 Neely, Section 1-16-17, and down 2,560 feet in No. 1 Smith, Section 2-16-17.

The Mazda Oil Co. is sidetracking liner at 2,095 feet in No. 1 Lawton, Section 10-16-15. Hill Meyer has derrick up for No. 2 McKinney, Section 9-16-15. Newblock and others have derrick up for No. 1 Hicks, Section 20-16-15. Olvey and others set 10-inch casing at 90 feet in No. 1 Hedgewood with rig up for No. 2 and has rig up for No. 1 Moore, Section 24-16-16. Page and others have rig up for No. 3 Alphin, Section 23-16-15.

The Phillips Petroleum Co. set 6⅝-inch casing at 1,960 feet in No. 6 Giller, Section 11-16-15, and has derrick pattern on location for No. 1 Moore, Section 24-16-16. The Plateau Oil Co. has derrick rebuilt and rig up at 2,270 feet for No. 1 Tatum, Section 7-16-15.

Pure Oil Operations

The Pure Oil Co. is down 1,910 feet in No. 2 Dumas, Section 16-16-15; set 10-inch casing at 65 feet in No. 4 Hays, Section 21-16-15; has rig up for No. 1 M. Hays, same section; drilling at 2,005 feet in No. 3 L. Hicks, Section 29-16-15, with 10-inch casing set at 65 feet in No. 1 Stocks, same section; location made for No. 7 Craig; drilling at 2[illegible] feet in No. 8 and derrick up for No. 9, Section 15-16-15. The Ray Drilling Co. is down 1,275 feet in No. 1 Stevens, Section 7-7-14; is building derrick for No. 1 Hicks and has 10-inch casing set at 65 feet in No. 2, Section 20-16-15.

Sam Richardson set 12½-inch casing at 65 feet in No. 3 E. G. Murphy, Section 23-16-15. The Roxana Petroleum Corp. set 15½-inch casing at 65 feet in No. 1 Flenniken, Section 8-16-15; rig up for No. 1 Scott and derrick up for No. 2, Section 19-16-15. Russell and others are down 1,600 feet in No. 1 Little, Section 21-16-15. Sanford and others are down 2,050 feet in No. 2 Murphy; building derrick for No. 3 and down 1,935 feet in No. 3 Berry, Section 8-16-15.

Scarborough and others set 6-inch casing at 2,010 feet in No. 1 Wardin, Section 21-16-15. Smitherman-McDonald have derrick up for No. B-4 Saxon, Section 5-16-16. Speary Johnson set 10-inch casing at 40 feet in No. 2 Block, Section 21-16-15. The Standard Oil Co. is drilling three wells on the Hardy lease, Section 11-16-15, and is arranging to set jacker at 2,015 feet in No. 6 Lingenbach, Section 22-16-15.

The Staves Oil Co. has derrick up for

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No. 1 Hicks, Section 20-16-15. The Steele Oil Co. is waiting on standard rig to pump No. 2 Hodges at 2,270 feet, Section 12-16-17. Stewart and others are down 30 feet in No. 1 and have rig up for No. 2 McKinney, Section 19-16-15. The Sun Oil Co. has rig up for No. 2 Wilson, Section 19-16-15. Sutherland and others are arranging to set 2½-inch tubing at 2,060 feet in No. 3 Ballard, Section 21-16-15.

E. T. Teter, trustee, is running core barrel at 2,215 feet in No. 1 Burnside, Section 33-17-13. The Texas Co. is down past 200 feet in Nos. 3 and 4 Cook, Section 21-16-15; waiting to pump No. 4 Alphin at 1,970 feet, Section 3-16-15; drilling at 1,990 feet in No. 1 Flenniken, Section 17-16-15. The Traffic Oil Co. has temporarily abandoned No. 1 Goodwin in sand rock at 2,785 feet, Section 20-16-14.

Umstead and others have a derrick pattern on location for No. 1 Cargile, Section 6-16-14. The Unity Oil Co. set 10-inch casing at 60 feet in No. A-1 Alphin and is building derrick for No. A-2, Section 24-16-16. The Vecino Syndicate tested No. 1 Burton dry at 2,076 feet, 2,082 feet and 2,087 feet and is now arranging to drill deeper, Section 25-18-16.

Winger and others have rig up for No. 1 Gill, Section 21-16-15.

A summary of operations during the past week in this field showed 25 wells waiting on standard rig to pump; 12 temporarily abandoned; 91 wells drilling; 22 rigs; 46 derricks and 9 locations.

Ouachita County Completions

Completions in the Ouachita County area of the Smackover Field numbered 25, one dry hole and one gas well, and new production amounting to 2,935 bbls.

The Atlantic Oil Producing Co. completed three wells, Rowland A-5, Section 29-15-16, pumping 200 bbls. at 2.265 feet; Rowland B-1, Section 20-15-16, pumping 200 bbls. at 2.280 feet, and Wells A-2, Section 25-15-17, pumping 40 bbls. at 2,320 feet.

Burton, trustee, completed No. 4 Hughes, Section 29-15-16, flowing 140 bbls. at 2.278 feet.

The El Dorado Union Oil Co.'s No. 6 Shirey, Section 30-15-16, is flowing 80 bbls. at 2,278 feet.

The Forest Oil Co. completed No. 4 Minore, Section 29-15-16, flowing 200 bbls. at 2.302 feet.

The Gilliland Oil Co. added four producers: No. 4 Kyle, Section 29-15-16, flowing 125 bbls. at 2,310 feet; No. 5 Kyle, Section 29-15-16, flowing 300 bbls. at 2,265 feet; No. 3 Solmson, Section 30-15-16, flowing 100 bbls. at 2.273 feet and Wells S-1, Section 25-15-17, pumping 60 bbls. at 2.273 feet.

The Gulf Refining Co. completed No. 3 Hardy, Section 28-15-16, pumping 120 bbls. at 2,280 feet. This well was formerly completed at 2.040 feet, with an initial production of 1,000 bbls.

L. K. Hamilton completed No. 1 Smith, Section 36-15-17, flowing 100 bbls. at 2,262 feet.

The Houston Oil Co. completed No. 6 Laney, Section 31-15-15, making 35,000,000 feet of dry gas at 2,278 feet.

Hunt and others completed No. 2 Keller, Section 24-15-17, flowing 45 bbls. at 2,278 feet.

Lewis & Clark completed No. 7 Berry, Section 24-15-17, pumping 180 bbls. at 2,293 feet.

The Metric Oil Co.'s No. 3 Horton, Section 36-15-16, went into salt water and was abandoned at 2,200 feet.

Murphy, trustee, completed No. 4 Snyder, Section 34-15-15, pumping 180 bbls. at 2,293 feet.

Snowden & McSweeney completed No. 6 Taylor, Section 29-15-16, pumping 25 bbls. at 2,315 feet.

Stumph & Todd completed two wells in Section 30-15-16, No. 1 La Grone flowing 70 bbls. at 2.283 feet, and No. 1 Shirley flowing 80 bbls. at 2,282 feet.

Sutton and others completed No. 4 Hughes, Section 28-15-16, flowing 150 bbls. at 2,287 feet.

The Texas Co. completed two wells in Section 30-15-16, Chandler B-4 flowing 200 bbls. at 2,322 feet and No. 6 La Grone flowing 160 bbls. at 2.284 feet, and No. 3 Smith, in Section 31-15-16, flowing 110 bbls. at 2,253 feet.

Wingfield and others completed No. 1 Smith, Section 36-15-17, pumping 120 bbls. at 2,268 feet.

Ouachita County Drilling

The Atlantic Oil Producing Co. has rig up for No. A-1 Brierton; set 6⅝-inch casing at 2,260 feet in No. A-2, and at 2,245 feet in No. A-3; waiting on standard rig with 800 feet of oil at 2,330 feet in No. A-4; with derricks built for Nos. A-5 and A-6, Section 25-15-17; waiting on standard rig to pump No. B-2 Brierton at 2,290 feet, same section; set 10-inch casing at 60 feet in No. A-6 Rowland, Section 29-15-16; derrick up for No. C-1 Rowland, Section 20-15-16, and rig up for No. D-1, Section 25-15-17.

Bray-Hawthorne are waiting orders at 2,210 feet in No. 1 Halford, Section 20-14-16. Burton et al set 10-inch casing at 40 feet in No. 7 Hughes, Section 21-15-16. The El Dorado Union Oil Co. set 6-inch casing at 2,220 feet in No. 1 Anderson with derrick up for No. 2, Section 19-15-16; derrick pattern on location for No. 3 Hughes with 6-inch casing set at 2,210 feet in No. 4, Section 28-15-16.

The Forest Oil Co. is losing returns at 2,100 feet in No. 1 Mullins, Section 28-15-16. Gilbertson et al set 10-inch casing at 40 feet in No. 8 Berry, Section 24-15-17. The Gilliland Oil Co. is down 50 feet in No. 6 Kyle and set 6-inch casing at 2,245 feet in No. 7, Section 29-15-16; has rig up for No. S-1 LaGrone, Section 36-15-17; rig up for No. 6 Patton, Section 31-15-16.

The Gulf Refining Co. set 10-inch casing at 105 feet in No. 5 Fincher, Section 33-15-16; setting 2-inch tubing at 2,300 feet with 1,900 feet of oil in the hole at No. 7 Harris, Section 30-15-16; has derrick up for No. 3 T. C. Patton, Section 32-15-16; set 6-inch casing at 2,205 feet in No. A-3 Patton and bailing to test No. 4-A at 2,210 feet, Section 31-15-16; bailing to test No. 6 Solmson with derrick up for No. 7, Section 29,15-16; bailing to test No. A-6 Umstead, Section 33-15-15; set 6-inch casing at 2,235 feet in No. A-4 Werner, Section 36-15-17; rigging up to drill No. 2 Hardy deeper from 2,070 feet, a well formerly completed as an 1,800-bbl. producer, Section 28-15-16.

Gray and others have derrick up for No. 2 Myar estate, Section 32-15-16. Hale and others have rig up for No. 2 Brierton, Section 25-15-17. The Home Refining Co. is waiting on standard rig to pump No. 1 Anderson at 2,330 feet and set 10-inch casing at 55 feet in No. 2, Section 26-15-17.

The Johnson Drilling Co. set 10-inch casing at 80 feet in No. 1 Ritchie estate, Section 21-15-16. Keen & Woolf are down 1,740 feet in No. 1 Myar estate and have derrick up for No. 2, Section 32-15-16. Knox and others set 10-inch casing at 60 feet in No. 3 Shirey-Berg, Section 29-15-16. Koury and others set 10-inch casing at 80 feet in No. 1 Wells, Section 24-15-17. Kin and Thomas are bailing to test 18 ft of broken sand at 2.345 feet in No. Peace, Section 26-15-17. Loca others are down 1,100 feet in No. Berg, Section 4-16-15. The Lo Smackover Oil Co. set 6-inch casing 1,880 feet in No. 5 Mangus, Section 15-17.

The Magnolia Petroleum Co. set 6 inch casing at 2,200 feet in No. Smith, Section 3–15-16; and has d rick pattern on location for No. 1 Hard Section 20-15-16. The Mangus Oil C is waiting on standard rig to pump N 5 fee at 2,325 feet. No. 3 fee report drilling in error, Section 24-15-17. T Marr Oil Corp. is swabbing to test No. Patton at 2,255 feet, Section 31-15-1 set 6-inch casing at 2,235 feet in N 1 T. C. Patton, Section 32-15-16.

The Majestic Smackover Syndic set 10-inch casing at 70 feet in No. A McElroy, Section 29-15-16. The Mi Continent Petroleum Co. is nailing bac to deepen No. 4 Shirey-Berg which stands 400 feet in oil at 2,285 feet, Sec tion 29-15-16. R. P. Morris is arranging to resume drilling at 1,168 feet in No. Stringfellow abandoned at that dep some time ago as Shirey-Berg No. Section 20-15-16.

Myerscough and others are runnin sand pump at 2.350 feet in No. 1 Brier ton, Section 26-15-17. R. B. Nelson bailing to test No. 1 Anderson at 2,30 feet, Section 26-15-17. Peace and others are down 760 feet in No. 1 Alexander Section 22-15-17. The Phillips Pe troleum Co. is waiting on standard rig to pump No. 4 Hearnsberger at 1,90 feet with 700 feet of oil in the hole Section 33-15-16. J. D. Reynolds is waiting on standard rig to pump No. C. E. Cramer at 2,290 feet, Section 15-16.

The Skelly Oil Co. set 6⅝-inch casing at 2.235 feet in No. 1 Chandler, Section 19-15-16. The Smith Refining Co. set 10-inch casing at 80 feet in No. 7 Section 30-15-16 and is bailing to test No. B-1 Patton at 2,260 feet, Section 31-15-16. Snowden & McSweeney have rig up for No. 7 Taylor, Section 29 15-16.

The Standard Oil Co. set 6-inch casing at 2.235 feet in No. 3 Minor, Sec tion 21-15-16; set 6-inch casing at 1,80 feet in No. 2 R. Bennett, Section 33 15-15; has rig up for No. 10 Umste Section 32-15-15.

The Sun Oil Co. set 12½-inch casing at 40 feet in No. 2 Berry, Section 30 15-17 and set 8-inch casing at 2,28 feet in No. 4 Patton, Section 31-15-16 Sutton and others are arranging to deepen No. 1 Hughes, formerly completed as a 100-bbl. producer at 2,035 feet Section 28-15-16; and set 10-inch casing at 60 feet in No. 7, same section. The Sure Oil Co. is down 2,250 feet in No. fee, Section 30-15-16 and has derrick pattern on location for No. 8.

Stumph and Todd set 10-inch casing at 70 feet in No. 2 fee, Section 30-15-16 have rig up for No. 2 LaGrone, same section. The Texas Co. set 10-inch casing at 60 feet in No. B-6 F. L. Chandler Section 30-15-16; set 10-inch casing at 45 feet in No. B-7 and has rig up for No. B-8; waiting on standard rig to pump No. 7 LaGrone at 2,270 feet, Section 30-15-16; setting 6¼-inch casing at 2,240 feet in No. 8; set 10-inch casing at 60 feet in No. 11; waiting on standard rig at 2,280 feet for No. Snow; set 6¼-inch casing at 2,235 feet in No. 2; has rig up for No. 4; setting 6¼-inch casing at 2,240 feet in No. 6; set 10-inch casing at 55 feet in No. Stout Lumber Co., Section 31-15-16 and in the same section have rig up for No. 4 Smith.

Trammell and others are waiting on 6-inch casing at 2,240 feet in No. Shirey-Berg, Section 29-15-16; the V. E. F. Drilling Co. has rig up for No. Patton, Section 32-15-16 Whittaker and others have rig up for No. 1 Anderson Section 23-15-17. Whittiken and Th have rig up for No. 2 Berg, Section

(Continued on Page 110)

East Central Texas

By Staff Correspondent

CORSICANA, Tex., April 21. — The Boyd Oil Co.'s important wildcat on the Rand farm, in the Prairieville district in southern Kaufman County, got Woodbine sand at 3.416 feet and drilled in 3 feet and got salt water. The Woodbine sand was very low in this well. It has been one of the most closely watched tests in the East Central Texas area and drilled on a large block of what was regarded as very favorable acreage

Attention is now centered on Skinner & Kelsey's No. 1 Barrow, on the Terrell survey, in the northeast corner of Kaufman County, not far from the Hunt County line. This well got the Austin chalk higher than the test of Germany and others on the Kirby farm, Edens survey, and it is regarded as the most favorably located of the wildcats drilling in that general district. The owners of the well have been approached with offers to buy interests in the well and the lease but no deal has yet been reported. The well should be to the Woodbine sand—if it is there—before the end of the present month.

In Hopkins County, Schriver, Drebirn and others are shut down at 1,470 feet in No. 1 R. Harmon, Russell survey. Kelsey and others have a rig up for No. 1 A. Brooks on the Dowdle survey. G. J. Smith is rigged up on No. 1 T. W. Hall, Tumage survey Morland's No. 1 Coppedge, Hamilton survey, is shut down at 800 feet. The E. L. Smith Oil Co. is drilling below 800 feet in No. 1 Pippins, Hawkins survey.

In Kaufman County, Rosser and others and the Texas & Pacific Coal & Oil Co.'s No. 1 Carlisle, Brown survey, was abandoned as dry at 3,122 feet.

In Raines County, the Alcorn Oil Co. was drilling in sandy lime at 2,240 feet in No. 1 King on the Crittenden survey. Yost and others were moving in to start No. 1 Tallett on the Tallett survey.

In Van Zandt County, Brookins & Jenkins are rigged up on Mrs. Hughes Alvarado survey.

In Delta County, J. E. McNeill's No. 1 Patrick Hodges survey was drilling chalk at 1,830 feet. The top of the chalk was at 1,715 feet.

In Franklin County, J. E. McNeill has made a location for No. 1 J. E. Harper on the Clift survey.

In Freestone County, Carter & Lytell's No. 1 Hackney, McNulty survey, had a showing of oil at 3,212 feet.

In Henderson County, the Ben Crow Oil Co.'s No. 1, on the Weise survey, was reported dry and abandoned at 2,800 feet. F. Haynes had a fishing job at 2,750 feet in No. 1 Wood, Russell survey. Richardson and others' No. 1 Eade, Southerland survey, was spudded in and was then shut down.

In the Powell Field

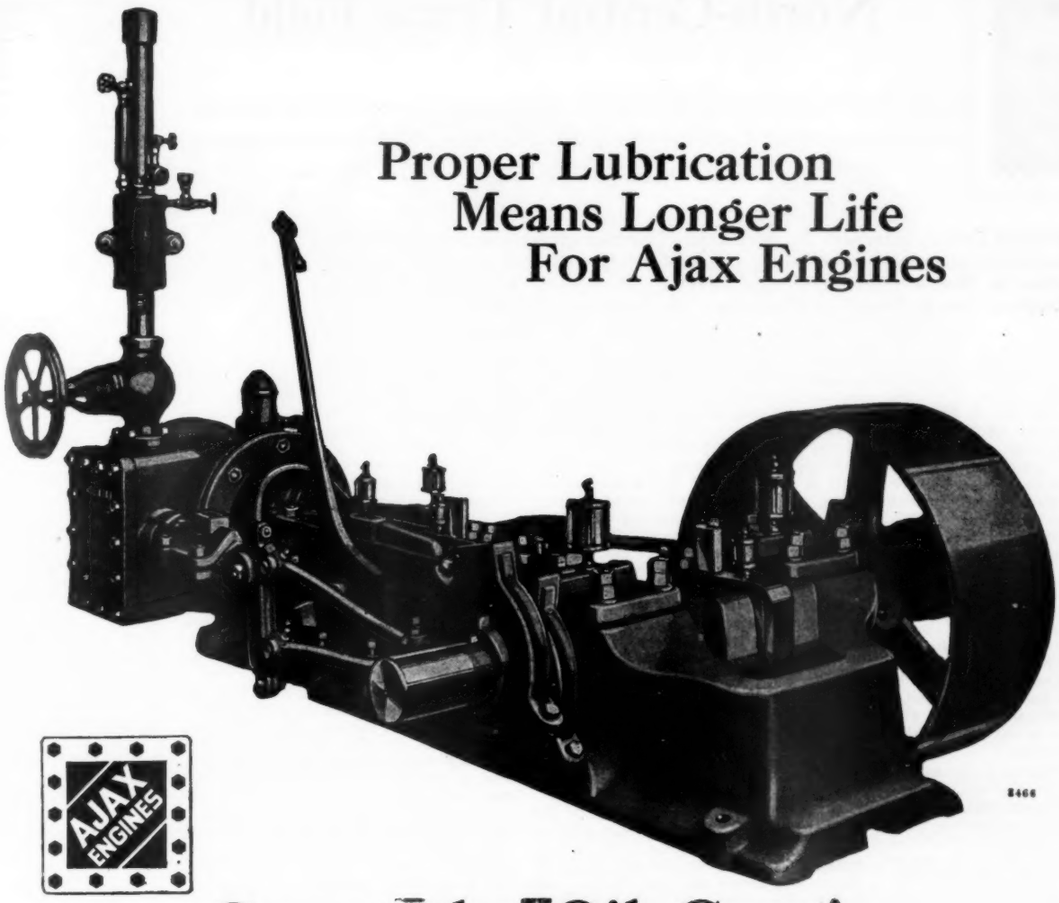
In the Powell Field, the Humble Oil Co.'s No. 25 Humphreys, Smith survey was swabbing 220 bbls. a day at 2,956 feet and No. 27 was swabbing 200 bbls. a day at the same depth and the company was drilling Nos. 26, 28 and 29 at close to sand depth. The same company's No. 16-A Ramsey, Smith survey, was swabbing 400 bbls. at 2,954 feet and was drilling Nos. 15-B, 17-B, 18-B, 19-B and 20-B Ramsey and was coring sand in No. 21-B Ramsey.

J. K. Hughes Development Co.'s No. 8 Alexander, which started off at 100 bbls. an hour from sand at 2,852-2,995 feet, was later reported to be flowing 85 bbls. an hour. No. 9 Alexander was swabbing 500 bbls. a day at a total depth of 2,997 feet.

John Hooser has another good well on the Hill tract, No. 2-B Hill, Powell Field, started off at 135 bbls. an hour.

The mystery test of J. A. Colliton and others, north of Alto, in Cherokee County, is reported to have a showing of oil, but the owners will not permit outsiders to enter upon the property and the importance of the showing cannot be definitely stated. It was expected that the well could be completed early this week. The reported oil showing was around 4,110 feet.

In the Richland District, Navarro County, a new derrick is up for a test by Max Gutman on the Brown tract McIntyre and others are ready to set pipe in their drilling well on the Boyd tract. The Boyd Oil Co. is close to completion in a test and Eslick and others are also close to completion in the same district.



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North-Central Texas Field

By Dan F. Dugan

Mitchell County increases its production. Archer increase due to flush production from recent completions. Baylor County well shrinks. Development active in Reagan and Crockett Counties. New deep producing sands in Stephens County found by Magnolia's No. 4 Brown, 200 bbls.

FORT WORTH, Tex., April 21.—The North Central Texas Field for the first time in several weeks reported a daily production in excess of 120,000 bbls. The past week's runs totaled 120,950 bbls. as against 119,010 bbls. daily for the previous week, a gain of 1,940 bbls. daily. Increases over the previous week were Electra, 710; Iowa Park, credited with the runs from Archer County, 1,235; Stephens County, 290, and the wildcat pools, 645 bbls. daily. Against these gains was a decrease from Burkburnett of 1,005 bbls. daily.

A production showing of importance was reported from Mitchell County which increased its daily runs the past week from 920 to 1,325 bbls. daily. The increase in Archer County was caused by the flush production from a large number of recent completions and increased pipe line facilities which is running oil that has been held in storage.

Archer County reported more than its regular quota of completions, ranging from 10 to 450 bbls. daily initial production. Baylor County's first producer, just west of the Archer County line, the Cranfill and others' No. 1 Mills, is not as large a producer as was first reported. Latest news from the well credit it with showing 30 bbls. of oil and 12 bbls. of water at 1,435 feet.

In the wildcat districts there was nothing new of importance. In Reagan and Crockett Counties development is going ahead with no new completions reported. Operators and geologists are divided in their opinions as to what the Reagan Field will ultimately prove to be. To date the completions show a small initial production, the crude is loaded with sulphur and what the field will eventually make is speculative.

Stephens County Stir

Considerable of a stir was created in Stephens County by the discovery of a new deep producing sand in the Magnolia Petroleum Co.'s No. 4 Brown, which showed initial 30 bbls. of oil an hour and 6,000,000 feet of gas daily at 100 feet in the pay at 3,975 feet. The production is reported coming from a gray lime which has never before been found in this locality at that depth. This new producing level may start some new work in Stephens County. The formation is believed by some to be the regular Ranger lime, found in Eastland County to the south at 3,400 to 3,600 feet. The usual depth of the older pay formation in the Curry Pool is around 3,200 to 3,275 feet, and the outcome of the Magnolia Co. is considered certain to initiate a program of deeper drilling in its territory.

Most of the production of Stephens County during its seven years as an oil producer has come from what is known as the Breckenridge lime, around 3,200 feet, known to be above the Ranger or black lime formation; and now, if the Ranger lime proves a paying source of oil, Stephens County may see some new development activity. Late field reports credit the well as showing around 200 bbls. of oil daily and its original initial gas flow.

The only oil producer of any size reported completed in Eastland County during the week was the Panhandle Oil & Refining Co.'s No. 14 Hightower, showing initial 40 bbls. daily at 1,215 feet.

Young County Tests

Bashara and others' No. 2 Marshall is the only test in Young County that developed an interesting condition. The well is southwest of Newcastle several miles. At 2,850 feet the top of the pay was penetrated; after drilling three feet the well is flowing around 250 bbls. of oil daily and showing some gas. Small storage tanks have been erected on the lease and the Prairie Pipe Line Co. is laying a small line to the well.

Two miles north of the new producer Heydrick and Bond found gas last week in No. 1 Graham at 1,125 feet, while Vance and others got a good showing further west in No. 1 Dawes. Everything points to a play in the western part of Young County this spring.

Late field reports are that the Bashara well is showing water but to what extent was not known and that the oil flow had decreased to around 55 bbls. a day.

What gives promise of extending the Knox-Finley sand over one-half mile to the north is the showing made in the wildcat test of E. C. D'Yarmett, No. 1 Carey just across the Clay County line and 8 miles north and east of Wichita Falls. The top of the sand was encountered at 1,137 feet and showed considerable gas and some oil. The sand, which was barely touched, will be tested at once. Casing has been set and the owner expects to complete some time this week.

Archer County Operations

A total of 47 wells were completed in Archer County during the week; 32 were oil producers ranging from 10 to 450 bbls. initial production and 15 were disappointments.

The town of Holliday's hopes for a future oil pool were brought much nearer reality this past week when Kimbrough & Miller's No. 1 Perkins, Section 20, Denton County school lands, came in for better than 50 bbls. from a sand at 1,070 feet. The land is owned by J. J. Perkins and a group of Wichita Falls capitalists, which purchased it several months ago. The well is within 600 yards of the center of town and its showing has caused trading in small tracts at a rate reminiscent of Burkburnett townsite days, though the prices are far lower. Holliday is not incorporated though plans for incorporating it are being talked of.

Another test attracting attention is the Bain Oil Co.'s No. 1 Block, which is drilling on the east half of Section 18 of the Houston & Texas Central Railroad survey, within 6 miles of the city limits of Wichita Falls. A sand was picked up at 1,205 feet which showed considerable oil. It will be given a thorough test as soon as casing is set. Several leases adjoining were sold immediately after the report.

In the older producing sections, the week was uneventful with no significant or large completions. North of the Panther pool district in the area opened up by the Gohlke-O'Donohoe well, Maer & Staniforth are preparing to test a sand at 1,602 feet in No. 1 Humphrey. In the vicinity of the Riner Bailey producers, upwards of a dozen drilling tests are drilling, with Riner & Bailey, the Sixty-Six Oil Co., the Empire Gas & Fuel Co. and Murchison & Fain among the active operators. West of the Panther Pool O'Neil & Ramming's No. 2 Wilson is a semi-completion showing estimated 250 bbls. at 1,600 feet.

Green & Flowers' No. 1 Ambercrombie is not yet completed and is already the subject of litigation. It made 100 bbls. in one 24-hour period swabbing and flowing by heads. It is three feet in a 1,390-foot sand.

In the same part of the county a wildcat, the first to fill with oil from one of the semi-shallow sands, is still awaiting completion. It is the Comac Oil Co.'s No. 1 Farmer, which is regarded as an almost certain commercial producer at 1,426 feet.

Promise of a producer is shown in the Texhoma Oil & Refining Co.'s No. 1 Taylor, northeast of the Gose Pool. The top of the sand, showing oil, was picked up at 1,616 feet. Casing was set and the test is expected to drill in during the next few days.

Dee Brothers' No. 1 Helms, about 2 miles northwest of Mankins, completed the repairs on the derrick which was damaged during last week's high wind, and is installing machinery to start drilling at once.

The Texas Co. is starting three tests close to the Greene & Flowers well, one to the northwest, one to the southwest and one to the southeast; the first is on Section 45, Ambercrombie & Taylor; the other two being on the Keys land, further north. The Magnolia Petroleum Co. is starting a test, its initial one in Archer County, on the northwest 60 acres of the W. Coffield land, A. J. Richardson survey.

The largest initial producer completed during the week was the Mutual Oil Co.'s No. 18 Wilson, which showed 450 bbls. daily at 1,590 feet.

Wichita County Work

There was a general increase in all field activities in Wichita County, a larger number of tests were reported as completions in Wichita and Wilbarger Counties than in the same time in several months. The banner producing well for the week was the Ryan Petroleum Co.'s No. 14 Nance in the South Electra Field, showing 85 bbls. at 1,310 feet.

Coring into a new sand at 1,781 feet, the Electra-Gulf Co.'s No. 2 John Watkins to the west of the Hill and Roberts discovery well on the Overby tract southwest of Iowa Park, is showing up for a good producer. The well about a week ago tested out the sand at 1,499 feet, the pay depth from which the discovery well found its production, but it failed to make a producer. Pipe was pulled and drilling continued, when the bit unexpectedly penetrated the new sand level.

Coring into a rich oil sand encountered at 1,771 feet, J. A. Gardner and others' No. 1 Watkins in the Hill & Roberts Pool, is credited in late field reports with swabbing 250 bbls. The well is an offset to the north of the Electra Gulf Co.'s No. 2 Watkins.

Hill and Roberts' No. 3 Overby, north of the discovery well, which after having tested the 1,500 foot sand, failed to show sufficient oil to make a producer, has pulled the pipe, to continue drilling and is at present reaming down to the new 1,780-foot pay.

Making three flows of about 30 bbls. each from the sand at 1,661 to 1,664 feet, Underwood and others' No. 1 Church, in the southeast corner of the north 80 acres of the west 100-acre tract in the Maer-Staniforth fee, gives indications of making a producer. The crew has started to move back the boilers and will commence swabbing at once.

Drilling eight feet into the sand picked up at a depth of 1,632 feet, Strauss and others' No. 2 Allen-Kemp, in the Beaver Creek section, is showing up for a good producer, the test has made several good head flows.

The Empire Oil & Gas Co.'s No. 1 Pierce, 3 miles east of Electra, unexpectedly encountered a sand at 1,467 feet, which, after being penetrated a short distance, shot a stream of oil over the derrick. The oil became ignited and the derrick was destroyed. The derrick will be replaced at once. The well is estimated to be at least a 150-bbl. a day producer.

Burkburnett-Hirschi

Completions reported in the Burkburnett and Hirschi Pools are the Clark and others' No. 6-A Ward & Todd, dry at 1,579 feet; Ft. Dearborn Oil Co.'s No. 14 Eads, dry at 1,050 feet; Gulf Production Co.'s No. 19 Guant, 14 bbls. at 1,145 feet; Ferris and others' No. 7 Eads, 60 bbls. at 1,000 feet.

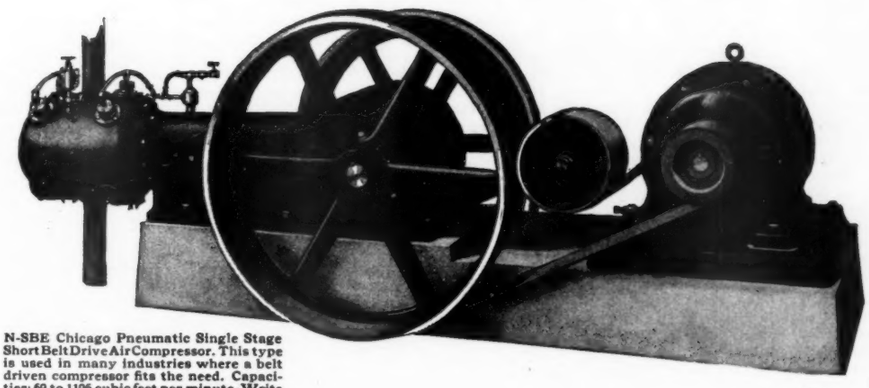
Drilling—Baldwin Brothers' No. 15-C Kennedy, fishing for bailer at 500 feet; Burk Cameron Oil Co.'s No. 9 Foster, coring a sand at 1,887 feet; Humble Oil & Refining Co.'s No. 29 Surrein, drilling in a sand at 1,690 feet; Kellogg and others' No. 1 Overby, drilling in shale at 1,600 feet; Langford and others' No. 9 Langford, drilling at 1,080 feet; Magnolia Petroleum Co.'s No. 21 Hortoin, fishing for lugs at 1,215 feet; Pigg Oil Co.'s No. 24 Hirschi, bailing and testing a sand at 1,880 feet; Perkins and others' No. 8 Surrein, drilling at 985 feet; Richardson and others' No. 1 Case, cleaning out to bottom, sand showing oil at 1,730 feet; Sheldon and others' No. 2 Sheldon, rigging to pump and test an oil sand at 995 feet; Grace Oil Co.'s No. 1-B Daniels, drilling at 510 feet; Gulf Production Co.'s No. 1 Martin, drilling in blue shale at 295 feet; Robinson Oil Co.'s No. 8 Roller, drilling at 365 feet; White and others' No. 5 Sides, drilling at 945 feet.

Wichita County

Completions: The Texas Co.'s No. 290 Waggoner, 35 bbls. at 1,735 feet; same company's No. 9 McBurney, dry at 1,180 feet; Apple and others' No. 1 Jennings, 60 bbls. at 1,480 feet; Chenault and others' No. 1 McCarty, dry at 1,720 feet; Cowling and others' No. 2 Seay, dry at 1,670 feet; Dale Oil Co.'s No. 5 Waggoner, 40 bbls. at 1,575 feet; same company's No. 6 Waggoner, 25 bbls. at 1,570 feet; Gulf Production Co.'s No. 7 Jennings, dry at 2,215 feet; Lanning and others' No. 1 McCarty, dry at 1,850 feet; Magnolia Petroleum Co.'s No. 24-I Waggoner, 15 bbls. at 1,945 feet; Ryan Petroleum Co.'s No. 14 Nance, 85 bbls. at 1,310 feet; Shaw and others' No. 1 Seay, dry at 1,825 feet; Underwood Drilling Co.'s No. 1 McCarty, 45 bbls. at 1,665 feet; Texhoma Oil & Refining Co.'s No. 1-D Burnett, dry at 2,000 feet; Comac Oil Co.'s No. 2 Terhune, dry at 1,900 feet; Shappell and others' No. 7 Jackson, 60 bbls. at 1,810 feet; Simms Oil Co.'s No. 1 Kemp, dry at 1,900 feet; Wilson and others' No. 1 Overby, 15 bbls. at 1,205 feet; Ferguson and others' No. 3 Waggoner, 30 bbls. at 1,530 feet; Hobbs Brothers' No. 18 Yarborough, 20 bbls. at 1,520 feet; South Vernon Oil Co.'s No. 3 Stephens, 15 bbls. at 900 feet.

Wichita-Wilbarger Drilling

The Texas Co.'s No. 292 Waggoner is spudding at 50 feet; Camp Oil & Gas Co.'s No. 8-B Douglas, drilling in shale at 1,350 feet; Drillers Development Co.'s No. 2 Douglas, drilling at 910 feet; Empire Gas & Fuel Co.'s No. 1 Pierce Oil Corp., standardizing on top of an oil



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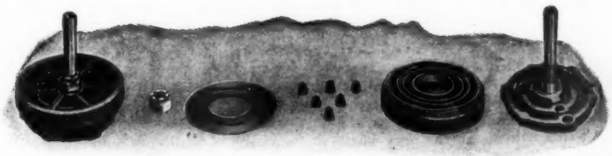

Simplate Valve disassembled showing component parts of a No. 5 Inlet Simplate Valve. Illustration shows valve seat, concentric discs, valve springs and valve keeper.

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sand at 1,460 feet; Gulf Production Co.'s No. 61 Miller, drilling at 115 feet; Humble Oil & Refining Co.'s No. 14-A Douglas, drilling at 1,765 feet; Kruger and others' No. 2-B Waggoner, rigging to pump and test a broken sand at 1,720 feet; Magnolia Petroleum Co.'s No. 2-C Waggoner, underreaming 6⅝-inch casing at 1,620 feet; United Production Co.'s No. 2 Fouch, drilling in brown shale at 1,325 feet; Baldwin Brothers' No. 1 Waggoner, bailing an oil sand at 1,825 feet; Culberson and others' No. 23 Jeff Waggoner, drilling at 500 feet; Cline and others' No. 1 Seay, drilling in sale at 1,645 feet; Eureka Production Co.'s No. 9 Waggoner, drilling at 1,025 feet; Empire Gas & Fuel Co.'s No. 11-A Waggoner, drilling at 1,630 feet; Fisher and others' No. 1 Fisher, drilling at 900 feet; Gulf Production Co.'s No. 4-C Waggoner, will test an oil sand at 1,790 feet; No. 21-A Burnett, drilling a sandy shale showing some oil at 1,360 feet; Griswold Oil Co.'s No. 24-B Burnett, bailing and testing an oil sand at 1,950 feet; Humble Oil & Refining Co.'s No. 1-B Burnettt, drilling at 905 feet; Magnolia Petroleum Co.'s No. 2 Pere Waggoner, running 6⅝-inch casing at 2,050 feet; No. 7-B Waggoner at 625 feet; No. 79-B Burnettt, drilling in shale at 1,350 feet; Panhandle Refining Co.'s No. 2 McCarty, rigging to pump and test a broken sand at 1,315 feet; Ryan Petroleum Co.'s No. 15 Nance, drilling in rock at 100 feet; Rio Bravo Oil Co.'s No. 10-A Waggoner, drilling with a rotary at 200 feet; Shaw and others' No. 1 McCarty, drilling at 1,640 feet; Saunders and others' No. 1 Nance, rigging to bail and test a broken sand at 1,675 feet; United Central Oil Corp.'s No. 1 McCarty, moving in a machine to drill an oil sand at 1,310 feet; Texhoma Oil & Refining Co.'s No. 31-A Waggoner, bailing and testing an oil sand at 1,485 feet; Campbell and others' No. 1 Chilson, drilling at 410 feet; Chenault and others' No. 1-B Jackson, drilling at 755 feet; Electra Gulf Oil Co.'s No. 2 Watkins, rigging to swab an oil sand at 1,770 feet; Gulf Production Co.'s No. 1 Griffin, drilling in shale at 1,645 feet; Hill & Roberts' No. 3 Overby, preparing to pump and test an oil sand at 1,500 feet; Lucky Hill Oil Co.'s No. 1 Laudenslager, moving in a machine over an old hole to test an oil sand at 1,943 feet; Petroleum Production Co.'s No. 1 Allen, drilling at 1,550 feet; No. 1-B Allen, drilling at 400 feet; Strause and others' No. 2 Allen, drilling at 400 feet; Underwood Drilling Co.'s No. 2 Maer, drilling in shale at 1,390 feet; Wilson and others' No. 2 Overby, drilling at 840 feet; Ferguson and others' No. 4 Waggoner, rigging to pump and test an oil sand at 1,545 feet; No. 5 Waggoner, drilling in shale at 1,355 feet; Robinson and others' No. 1 McCaleb, drilling at 2,810 feet; Magnolia Petroleum Co.'s No. 45 Piper, drilling at 1,070 feet; Matlock and others' No. 1 Waggoner, drilling at 1,600 feet; Noble Oil Co.'s No. 1 Waggoner, running 6⅝-inch casing at 1,460 feet; South Vernon Oil Co.'s No. 2 Stephens, 1,100 feet of oil in the hole and drilling at 1,300 feet; T & P Coal & Oil Co.'s No. 1 Smith, drilling in shale at 1,100 feet.

Archer County

Completions: The Texas Co.'s No. 1 Norred, dry at 1,380 feet; American Refining Co.'s No. 6-B K. & K. dry at 1,740 feet; Beaudoin and others' No. 1 Thompson, dry at 1,825 feet; Chenault and others' No. 2 Jackson, 25 bbls. at 1,725 feet; Clark and others' No. 2 Miller, 75 bbls. at 1,345 feet; Comet Petroleum Co.'s No. 11-A Ferguson, dry at 1,750 feet; Dale and others' No. 9 Wilmot, 75 bbls. at 1,600 feet; same company's No. 4-B Wilmot, 175 bbls. at 1,600 feet; Gohlke and others' No. 1 Humphrey, dry at 1,660 feet; Graham and others' No. 1-B Wilson, 35 bbls. at 1,595 feet; Itan Oil Co.'s No. 1 K. & K., dry at 1,910 feet; same company's No. 1 Wilson, dry at 1,670 feet; Jetter and others' No. 1 White, dry at 1,815 feet; Jones Oil Co.'s No. 3 Wilson, dry at 2,000 feet; same company's No. 4 Wilson, 35 bbls. at 1,620 feet; Kentucky Oil Corp. No. 4 Wilson, 150 bbls. at 1,585 feet; same company's No. 11-B Wilson, 50 bbls. at 1,585 feet; same company's No. 4-D Wilson, 90 bbls. at 1,390 feet; Lanning and others' No. 2 Parrish, 90 bbls. at 1,590 feet; same company's No. 3 Parrish, 120 bbls. at 1,590 feet; same company's No. 4 Parrish, 105 bbls. at 1,595 feet; McCarty Oil Co.'s No. 14 Wilson, 50 bbls. at 1,580 feet; Murchison and others' No. 4 Wilson, 350 bbls. at 1,633 feet; Mutual Oil Co.'s No. 16 Wilson, 10 bbls. at 1,405 feet; same company's No. 18 Wilson, 450 bbls. at 1,590 feet; same company's No. 22 Wilson, 10 bbls. at 1,400 feet; same company's No. 20 Wilson, dry at 1,395 feet; same company's No. 21 Wilson, dry at 1,415 feet; same company's No. 23 Wilson, dry at 1,450 feet; same company's No. 24 Wilson, dry at 1,424 feet; same company's No. 25 Wilson, 50 bbls. at 1,400 feet; Pace and others' No. 1 White, 400 bbls. at 1,625 feet; Parks and others' No. 1 Wilson, 110 bbls. at 1,575 feet; Ramming and others' No. 1 Wilson, 35 bbls. at 1,590 feet; R. M. F. Oil Co.'s No. 16-B Wilson, 70 bbls. at 1,685 feet; same company's No. 17-B Wilson, 35 bbls. at 1,400 feet; same company's No. 18-B Wilson, 150 bbls. at 1,590 feet; same company's No. 19-B Wilson, 80 bbls. at 1,395 feet; Shamrock Oil Co.'s No. 4-B Richardson, 100 bbls. at 1,330 feet; Shappell and others' No. 8 Jackson, 90 bbls. at 1,795 feet; Sixty-Six Oil Co.'s No. 1-D Wilson, 150 bbls. at 1,620 feet; Texhoma Oil & Refining Co.'s No. 1 K. & K., 220 bbls. at 1,485 feet; same company's No. 8-C Wilson, 180 bbls. at 1,595 feet; Verschoyle and others' No. 1 Moss, dry at 1,805 feet; Wood and others' No. 4 Wilson, 350 bbls. at 1,600 feet; same company's No. 5 Wilson, 100 bbls. at 1,405 feet.

Archer County Drilling

Drilling: The Texas Co.'s No. 1 Ambercrombie, drilling a broken sand at 1,150 feet; No. 2 Ambercrombie, drilling a pack sand at 275 feet; No. 1 Hardegree, drilling in hard lime at 1,100 feet; No. 1 Key, drilling in blue shale at 580 feet; No. 1-A Kay, drilling in white hard rock at 535 feet; No. 16 Parrish, drilling with a machine at 1,395 feet; American Refining Co.'s No. 1 Ward, drilling in rock at 1,385 feet; Andreade and others' No. 1 Haley, driling at 100 feet; Archer Bell Petroleum Co.'s No. 1 Bell, drilling in shale at 1,325 feet; Atlantic Oil Production Co.'s No. 1 Parrish, drilling in brown shale at 1,150 feet; No. 1 Wilson, cemented 6⅝-inch casing at 1,667 feet; Barkley & Meadows' No. 3 Wilson, drilling at 1,400 feet; Bohler and others' No. 5 Wilmot, drilling at 1,360 feet; Bridwell and others' No. 1-F Wilson, drilling at 1,505 feet; Camp Oil & Gas Co.'s No. 11 Wilson, cemented 6⅝-inch casing at 1,587 feet; Carter and others' No. 1 Parrish, drilling in rock at 1,350 feet; Parker Brothers' No. 5 Richardson, drilling at 950 feet; County Line Oil Corp.'s No. 1 Reilly, drilling at 100 feet; Cox and others' No. 1 Parrish, drilling at 1,300 feet; Darr and others' No. 1 Ferguson, topped an oil sand at 1,700 feet; Dillday and others' No. 1 Ferguson, drilling in hard shale at 2,840 feet; Douglas and others' No. 1 Wilson, drilling in brown shale at 1,345 feet; Empire Gas & Fuel Co.'s No. 8-B Wilson, 700 feet of oil in the hole at 1,600 feet; No. 11-D Wilson, 1,400 feet of oil in the hole at 1,585 feet; No. 14-B Wilson, testing an oil sand at 1,598 feet; No. 5-C Wilson, drilling in rock at 1,630 feet; No. 6-C Wilson, preparing to pump an old sand at 1,622 feet; No. 8-C Wilson, bailing an oil sand at 1,622 feet; F. & H. Syndicate's No. 15-A Ferguson, testing an oil sand at 1,450 feet; Erwin and others' No. 1 Wilson, shut down on top of an oil sand at 1,640 feet; Everett and others' No. 1 Miller, drilling in shale at 1,365 feet; Golding and others' No. 1 Cunkel, drilling in rock at 780 feet; Green and others' No. 1 Ambercrombie, cleaning out with a estimated production of 100 bbls. daily at 1,391 feet; Gulf Production Co.'s No. 1 Nichols, drilling at 1,270 feet; No. 1 K. & K., drilling at 1,095 feet; No. 1-B Wilson, drilling at 1,685 feet; Gwynn and others' No. 13 Mrs. Carter, testing an oil sand at 1,375 feet; No. 1 Wilson, drilling at 1,435 feet; Herbert Oil Co.'s No. 1 Blewett, trying to shut off water from a sand at 1,435 feet; Hill and others' No. 1 Wilson, drilling at 700 feet; Jones Oil Co.'s No. 5 Wilson, swabbing 200 bbls. daily at 1,623 feet; Kentucky Oil Corp.'s No. 5 Wilson, drilling at 1,500 feet; No. 10-B Wilson, drilling at 1,400 feet; Kimbrew and others' No. 1 Perkins, hole full of oil at 1,070 feet; Knight and others' No. 1 Ambercrombie, drilling without any showing at 1,540 feet; Maer and others' No. 1 Humphrey, bailing an oil sand at 1,600 feet; No. 12-B Wilson, drilling at 1,325 feet; McCarty Oil Co.'s No. 1-B Wilson, drilling at 725 feet; Mitchum and others' No. 1 Knezek, drilling in shale at 1,250 feet; Moore and others' No. 1 Wilson, drilling at 500 feet; Murchison and others' No. 1 Coody, at 835 feet; No. 1 Graves, drilling in shale at 1,245 feet; No. 5 Wilson, swabbing 327 bbls. daily at 1,616 feet; No. 6 Wilson, bailing and testing an oil sand at 1,625 feet; No. 1 Wilson, drilling at 1,620 feet; Mutual Oil Co.'s No. 15 Wilson, preparing to pump and test and oil sand at 1,590 feet; No. 17 Wilson, will test a sand showing oil at 1,385 feet; No. 26 Wilson, drilling in shale at 1,500 feet; Oil Investment Co.'s No. 1 Thompson, drilling in rock at 1,350 feet; Pace and others' No. 2 White, an oil sand at 1,633 feet; Parker and others' No. 3 Morrison, drilling in shale at 1,770 feet; Petroleum Production Co.'s No. 7-C Wilson, drilling at 1,175 feet; Ramming and others' No. 2 Wilson, swabbing 250 bbls. daily from a sand at 1,590 feet; Riner and others' No. 1 Wilson, drilling in soft rock at 1,370 feet; R. M. F. Oil Co.'s No. 20-B Wilson, drilling at 1,000 feet; Rogers and others' No. 1 Frerich, drilling in shale at 720 feet; Scott and others' No. 2 Mrs. Carter, topped an oil sand at 1,373 feet; Shamrock Oil Co.'s No. 1-D Wilson, drilling at 1,200 feet; No. 5 Harbison, drilling in red shale at 1,070 feet; Shappell and others' No. 9 Jackson, drilling at 500 feet; Sibley and others' No. 9 Wilmot, rigging up a machine at 1,585 feet; Sixty-Six Oil Co.'s No. 2-D Wilson, cemented 6⅝-inch casing at 1,620 feet; No. 3-D Wilson, sand at 1,620 feet showing oil; Staley and others' No. 3-B Wilson, drilling at 1,360 feet; Stone and others' No. 1 Wilson, drilling at 1,170 feet; Sun Oil Co.'s No. 2 Kovar, drilling in shale at 1,410 feet; No. 4 Farmer, drilling at 1,240 feet; Sunshine State Oil & Refining Co.'s No. 6 Carter Brothers, drilling in rock at 1,560 feet; Swastika Oil Co.'s No. 3-C Richardson, drilling at 1,330 feet; Texhoma Oil & Refining Co.'s No. 10 Carter, at 1,425 feet; No. 1-B Caleb, at 1,810 feet; Verschoyle and others' No. 6-B Wilson, drilling rock at 800 feet; Wall-Duke Oil Co.'s No. 1 Benson, drilling in mud at 695 feet; Willis and others' No. 2 Jackson, drilling without any showing at 1,835 feet; Wood and others' No. 7 Wilson, drilling in shale at 1,325 feet; No. 9 Wilson, drilling at 1,500 feet; No. 10 Wilson, drilling in shale at 1,585 feet.

Young County

Completions: The Peter Oil Co.'s No. 5 Kemp, 25 bbls. at 1,065 feet.

Drilling: Bashara and others' No. 1 Marshall, showing estimated 250 bbls. daily from a sand at 2,850 feet; Davis and others' No. 1 Benson, drilling at 1,040 feet; Dyer and others' No. 1 Gilmore, drilling in hard shale at 2,795 feet; Keydrick and others' No. 1 Graham, drilling in rock at 1,130 feet; Henson and others' No. 1 River Bed, drilling at 1,625 feet; Logan and others' No. 1 Wild, drilling in soft rock at 1,265 feet; Mid-Kansas Oil & Gas Co.'s No. 1 Gibson, shut down for 5½-inch casing at 4,092 feet; Mutual Oil Co.'s No. 1-B Costello, drilling at 1,300 feet; North American Refining Co.'s No. 3-B Scott, fishing for tools at 2,627 feet; Ralco Oil Co.'s No. 1-A Hockaday, fishing for tools

(Continued on Page 108)

News of Mexican Fields

By George Blardone

TAMPICO, Mexico, April 18.—In the number of wells completed in Mexican fields the past two weeks, the most noticeable is Mexican Gulf Oil Co.'s No. 44 El Barco, which, at the very shallow depth of 1,630 feet, is reckoned good for 7,000 bbls. This El Barco district, it will be recalled, lies to the east of the Cacalilao sector of the Panuco Pool, and its most distinguishing feature to date has been, with one exception, as a place of deep holes, principally dusters. The Mexican Gulf Oil Co. and Kern Mex Oil Fields, Ltd., the latter a subsidiary of Kern River Oil Fields of California, Ltd. (English capital), hold this El Barco district together, it being nicely checkerboarded between them. The best well heretofore in the district was reported as a completion last month when Kern Mex brought in its No. 7, at 2,103 feet, rated at 2,000 bbls. There have been some smaller and deeper wells completed by each company, it is true, but the well of last month, and now this Gulf well at 1,630 feet, appears to put El Barco on the producing map. The oil is similar, to speak generally, to the Panuco product.

The biggest completion in the South Fields for some time now is Huasteca Petroleum Co.'s No. 23 Tierra Blanca, which is rated good for 25,000 bbls. at a sub-sea level of 1,966 feet. Toteco is getting on the list again for fast upon the heels of International Petroleum Co.'s No. 43 there, a well rated good for a potential head of say 8 000 bbls., is reported; Mexican Gulf Oil Co. completed its No. 49, at a sub-sea level of 1,257 feet, rated good for 4,500 bbls. Another South Field completion is Penn Mex Fuel Co.'s No. 23 Alamo, which at a depth of 2,209 feet, (the surface elevation in the Alamo is around 100 feet), will probably be able to produce some 3,000 bbls.

Cacalilao Completions

The Cacalilao sector of the Panuco Pool, in the Northern Fields, has contributed seven completions of late of 1,000 bbls. or more, the new production, estimated when the wells came in, being some 36,500 bbls. There were a few minor completions of small worth, and 12 failures can be chalked up, dry holes, junked holes and salt water wells. Of the major producers completed, Mexican Sinclair Petroleum Corp., heads the list with its No. 50, in Lot 2, which at 1,860 feet, is rated good for 10.000 bbls.; its No. 34, in Lot 3, is rated for 6,000 bbls. at 1,620 feet; while it has a 50-50 interest in Mexican Gulf Oil Co.'s No. 46, in Lot 1, now rated at 12,000 bbls. at 1,683 feet, the hole having been cleared of a bridge and sent a little deeper as noted. Rich Mex Oil Co.'s No. 68, in Lot 1 (4-B), is rated around 4,000 bbls. at 1,726 feet. Mexican Eagle Oil Co., No. 11, Lot 1 (4-B), is rated at 2,000 bbls. at 1,760 feet. International Petroleum Co.'s No. 57-A, Lot 4, is rated at 1,500 bbls. at 1,800 feet. Transcontinental Petroleum Co.'s No. 80, Lot 1, is good for 1.000 bbls. at 1,880 feet.

The older sectors of the Panuco Pool have not had a pay completion for over two weeks, although two failures can be recorded there. The same applies to Topila.

Salt Water in Cacalilao

The salt water invasion in Cacalilao continues. Some two or three days ago the famous Rich Mex No. 10 (Lot 1,

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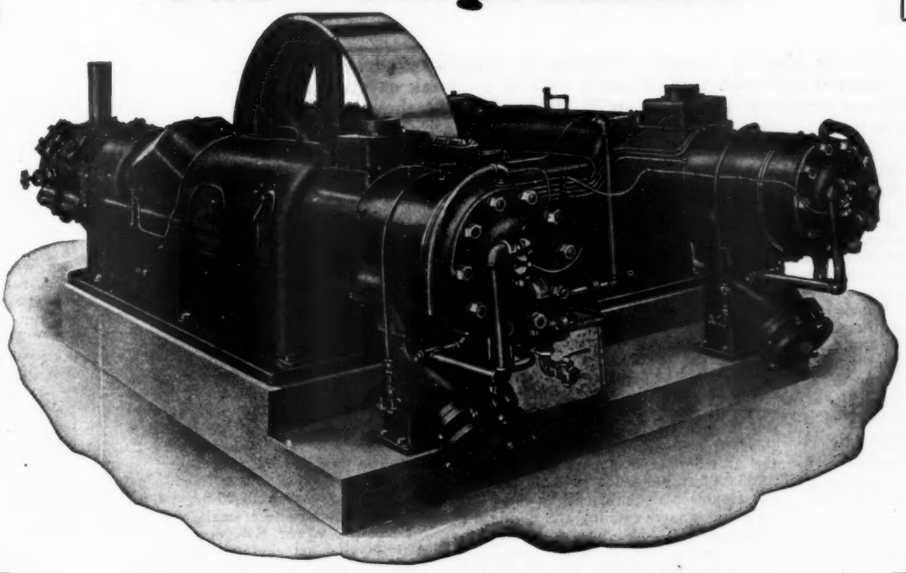

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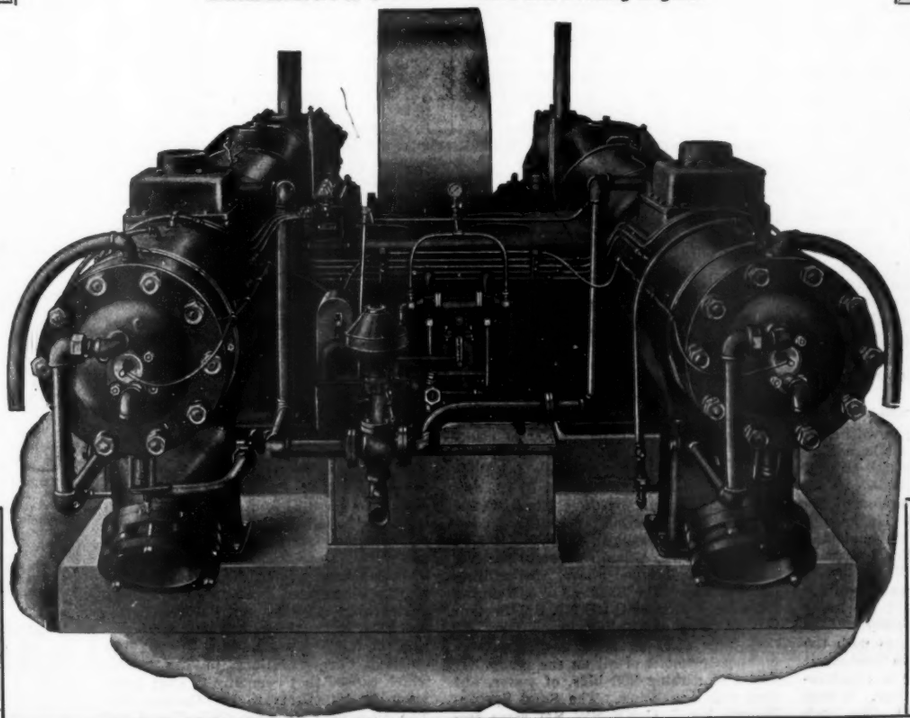

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Oklahoma Field Operations

By C. D. Lockwood

Gilcrease Pool in Hughes County extended by 850-bbl. producer. Carter Oil Co. completed 1,200-bbl. well in north part of Burbank extension where little had been expected. Production of Burbank Field shows decline for first time in weeks. Good well brought in in Tuskegee Pool.

An 850-bbl. producer in the Gilcrease Pool in Hughes County, which apparently marks the westward trend of the producing area in that locality, a 414-bbl. well in the Tuskegee Pool of southern Creek County, and a 1,200-bbl. surprise in the north part of the Burbank extension sprung by the Carter Oil Co. where nothing much was expected, mingled in the news of the week from the Oklahoma fields with reports of a rapid decline in Burbank production, and the first apparent failure in the lower sand in the Vern-Bruner Pool of Tulsa County.

The new well in the Gilcrease Pool is the Gilcrease Oil & Gas Co.'s No. 1 Simon, NE cor. NW. Section 20-9-9, a west offset to the same company's No. 1 Bruner, which was good for 208 bbls initially and was holding up close to that figure from sand at 3,031-42 feet in shale and lime. The present producer found the sand at 3,038-53 feet and was drilled one foot deeper into shale. It came in at the rate of 60 bbls. an hour, maintaining that production for the first six hours, but fell off and the first 24 hours' gauge recorded 850 bbls. It was making about 30 bbls. an hour at latest reports. In connection with the other new developments in the western side of the area, this well appears to mark the trend of production, although the indications do not point out much of importance as yet, because of the irregular and peculiar nature of the structure in the 9-9 country. However, study of the three other wells on the west side of the field which have attractd interest leads many producers to forecast a rather extensive pool in that direction. One of these, the Arkansas Fuel Co.'s No. 1 Brown, SE cor. NE, Section 18-9-9, had a 125-bbl. showing two feet in the sand topped at 3,100 feet, and another, Atkins' No. 1 Charles, NW cor. SW SW, Section 19-9-9, was showing for 25 bbls. three feet in the sand picked up at 3,085 feet. The Oklavania Oil Co.'s No. 2 Smith, C SE SW NE, Section 17-9-9, found a sand which was dry at the top but carried water six feet in. About 2 miles north, the Transcontinental Oil Co.'s No. 1 Carter, SE cor. NE, Section 5-9-9, reached a sand at 3,025 feet and found 2,000,000 feet of gas two feet in. It was drilled to 3,055 feet where water appeared and the bit passed out of the sand at 3,065 feet. Shale extended to 3,080 feet, where the 6-inch pipe was being run to shut off the water and proceed deeper.

Progress at Cromwell

Several wells were getting down in the Cromwell Field to the point where they will soon be interesting, although no new developments have been recorded to attract attention with the exception of the manner in which the T. B. Hoffer and others' gusher is holding up and the Cromwell Oil & Gas Co.'s No. 2 Bruner, SW cor. NE SW, Section 15-10-8, which drilled itself in a little deeper resulting in increased gas flow. Top of the lower sand was reached at 3,466 feet and it had about 6,000,000 feet of gas with the bit nine feet in. Total depth was about 20 feet in the sand, and the gas had increased to about 15,000,000 feet. It was also spraying some green oil along with the gas. This well is almost identical with the H. F. Wilcox Oil & Gas Co.'s producer which it offsets to the north.

Tuskegee Pool Addition

The Tuskegee Pool addition was contributed by the Independent Oil & Gas Co. and McMahon. It was their No. 1 Scott, NW cor. SE SE, Section 31-14-10, diagonally offsetting the same interests' discovery well, and was good for 414 bbls. during the first 24 hours from the Wilcox sand at 3,425-32 feet. It was to be deepened. It was flowing regularly every quarter hour. In the same section, the Empire Gas & Fuel Co.'s No. 1 J. Barnett, NE cor. NW SW, which found the Dutcher sand about March 30 at 2,795-98 feet, and made 125 bbls. initially, had trouble with the packer in the 6-inch pipe and was re-running the casing. It produced 180 bbls. one day with the 6-inch in the hole, the latest production figures showing 40 bbls., but it is thought it will come back as soon as the pipe is run again. The sand was found unexpectedly, with the 8-inch set at 2,430 feet, causing the trouble. The Independent Oil & Gas Co.'s No. 1 Barnett, SE cor. NW NE, same section, was a failure, finding a hole full of water in the Wilcox sand at 3,536-60 feet. The same company had a rig up for its No. 2, NW cor. SW NE, and made locations for No. 3, SE cor. SE NW, and for No. 4, SW cor. SW NE, same section. The Waite Phillips Co. was drilling at 2,500 feet in its No. 1, SE cor. NE NW, Section 31-14-10. The Shaffer Oil & Refining Co. was straight reaming and cleaning out its No. 1 Scott, NE cor. SW SE, same section, at 2,777 feet, and had a rig in place for its No. 2 NW cor. SW SE. The Darby Oil Co. & Burke-Gries were running the 6-inch to 3,243 feet in their No. 1 M. Barnett, SW cor. SE NE, Section 31-14-10, and staked a location for their No. 2, NW cor SE NE, same section.

Vern-Bruner Setback

The Vern-Bruner area of Tulsa, "backyard" pools, received a setback during the past week when Thompson & Black's No. 3 Bruner, C SW SE SE, Section 6-19-12, found only 1,000 feet of dead oil from the upper sand at 1,914 feet and nothing in the lower pay which has furnished the big production in the other wells in the field. Total depth was 2,060 feet. This is on the 40-acre tract for which the company was reported to have paid better than $20,000 for the Wilcox sand rights only, the rights to production in the upper horizon remaining with Chas. Page, the former owner. Thompson & Black had a machine in place for their No. 4, C SE SE, Section 6-19-12, and also had a rig up for their No. 5, C SE SE SE, same section. The same company's No. 1 Berryhill, C NW NE NE, Section 7-19-12, a south offset to the No. 3 Bruner, mentioned above, was drilling at 1,200 feet. The Shaffer Oil & Refining Co.'s No. 3 Bruner C SE NE SE, Section 6-19-12, was succeeding in shutting off the water after plugging back, and was making 180 bbls. of oil on the pump. It was also making 360 bbls. of water, but that was decreasing. The Sand Springs Home's No. 7, C NE SW SE, same section, was completed for 920 bbls. in sand at 2,043-53 feet. In the Vern Station part of the pool, the Shaffer Oil & Refining Co.'s No. 2 and 3 in the SW NW, Section 4-19-12 were tanking 352 bbls. daily together.

In the Osage

In the Osage, the Barnsdall Oil Corp.'s No. 4 CEL NE NE, Section 15-27-10, an old well, was pumping 15 bbls. from the Burgess sand at 1,951-61 feet. The same company was spudding its No. 2, NE cor. NW, same section. H. V. Foster and others' No. 3, NW cor. SE, Section 18-27-11, topped the Mississippi lime at 1,958 feet and at total depth of 2,002 feet was pumping 11 bbls.

The Mid Kansas Oil & Gas Co.'s No. 1, SW cor. Section 21-25-8, was a rig. E. B. Lawson made a small well out of his No. 1, NW cor. SW, Section 28-25-8. After a 40 quart shot in sand at 1,120-31 feet, it made 10 bbls. His No. 5, CEL SE SW NW, same section, was drilling at 100 feet. The Texas Co.'s No. 1, NE cor. SE, Section 29-25-8, had a machine in place. The Mid-Kansas Oil & Gas Co. was drilling at 600 feet in its No. 1, NW cor. NE, Section 34-25-8.

The Mutual Oil Co. abandoned its No. 17, CSL SW NE SE, Section 32-24-8, at 773 feet. The Test Leg Oil Co. was drilling at 550 feet in its No. 1, CWL SW NE, Section 31-25-9, and the Devonian Oil Co. was drilling its No. 1, CEL SE NW, same section, an offset, at 570 feet. The Dresser Oil Co. abandoned its old well, No. 15, CSL NE SW, Section 34-25-9, at 2-113 feet.

In Okfuskee County, the Shaffer Oil & Refining Co. and Independent Oil & Gas Co.'s No. 1 Lowery, S NE SE NW, Section 30-11-10, picked up another gas sand at 2,960-70 feet, which was good for 8,000,000 to 10,000,000 feet of gas and was spraying some oil. The previous showing in this well was about the same amount of gas in sand at 2,915-20 feet.

Nothing exciting came out of Wewoka during the week, although several wells should demand attention in the near future. The deep sand test, the Dixie Oil Co.'s No. 5 Long "A," NW cor. SW SE NE, Section 32-8-8, which found the deep horizon at 3,873-90 feet, and drilled two feet deper into shale, was shot with three quarts without visible results, and was being rigged up to drill deeper. There was no evidence of water, and the production was fluctuating from 30 to 75 bbls. daily, and it is the hope of the operators that another pay level will be found below the shale break.

Surprise at Burbank

The Burbank surprise was the Carter Oil Co.'s No. 3 Pappan, NW cor. SW NW, Section 3-27-5, Kay County extension. It picked up the gas sand at 2,865 feet and found first oil at 2,875 feet, and at total depth of 2,920 feet was good for 50 bbls. hourly. This production was totally unexpected because of the deep duster abandoned by the Phillips Petroleum Co. in the NE cor. NW, same section, at 3,535 feet, and the Roxana Petroleum Corp.'s failure to the north, which caused that company to shut down work on its offsets to the Carter well. The Phillips Petroleum Co.'s No. 4 SE cor. NW, Section 3, which was abandoned at 1,752 feet, was going ahead a result of the Carter find.

In spite of 15 new producers in the Burbank Field, a loss of 4,033 bbls. in daily average production was recorded for the week ended April 16. The Tonkawa Field, with T. B. Slick's new deep producer and four other new ones to help it, increased 588 bbls. Wewoka had a couple of new ones but fell 267 bbls. while the 9-9 country raised its head a little and climbed up 62 bbls. The Tonkawa production was 36,084 bbls. from 669 wells; Burbank made 107,800 bbls. from 1,343 wells; Wewoka produced 7,437 bbls. from 49 wells; and the Papoose-Gilcrease pools made 1,441 bbls. from six producers.

New work in the State was about the same. There were 89 locations on April 12; 281 rigs, 997 wells drilling, 261 wells shut down and 112 completions, a total of 1,740 operations. In comparison with the week previous, this was a decrease of three operations.

Around the new well of T. B. Slick's in the Tonkawa Field, 15 new rotary rigs were under construction, most of them nearly completed. These included the Comar Oil Co.'s No. 1-C Beverlin, SE cor. NW, Section 34-25-1w; No. 1-C C. C. Endicott, SE cor. NE SE, same section; No. 2-C C. C. Endicott, NW cor. NW SE, same section; No. 10 C. C. Endicott, CSL N half SE, same section; and No. 1-C Laura Endicott, SW cor. NW SW, Section 35-25-1w. The Pennok Oil Co. was also building a rig for its No. 1-D C. C. Endicott, SE cor. Section 34-25-1w, and for No. 4-D C. C. Endicott, NE cor. SE SE, same section. The Gypsy Oil Co. was building a rig for No. 81 Shawver, NW cor. Section 2-24-1w, and for No. 82 Shawver, CNL NW, same section. The Blackwell Oil & Gas Co. was also building one for its No. 4-C Ruzek, NE cor. NW, Section 3-24-1w. T. B. Slick's No. 2-S.S. Laura Endicott, NW cor. SW SW, Section 35-25-1w, and his No. 7-S.S. Laura Endicott, CSL SW, same section, were included in the list of new ones. No. 18, on the same list, an old well, was drilling deeper for the lower pay. The Comar Oil Co.'s No. 4 Carmichael, NE cor. Section 3-24-1w, was another old well going deeper, old total depth having been 2,564 feet. The Hamilton Oil & Gas Co.'s No. 5-B Rence, NE cor. SW, Section 11-24-1w, was another deep test for which a rig was being built, over a mile from the deep producer, as was also the Comar Oil Co.'s No. 1 McCutcheon, NW cor. SW, same section. The same company's No. 4 Koffenbrink, NW cor. NE SW, Section 36-25-1w, will be an interesting test to watch as it is going deeper after missing production in the upper sands. The latest production of the Slick No. 1-S.S. Laura Endicott, was 2,705 bbls. on April 19, from sand at 4,060-85 feet. It was completed at that depth.

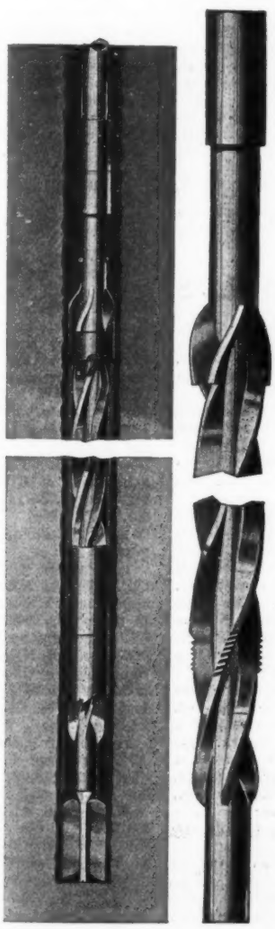
Burbank Production

Daily average production in the Burbank Field for the week ended April 16 was as follows:

Company—	Wells	Bbls.
Carter Oil Co.	177	6,121
Comar Oil Co.	7	30
Cosden Oil & Gas Co.	69	1,727
Devonian Oil Co.	16	95
Gardner Petroleum Co.	30	45
Gypsy Oil Co.	134	18,477
Kewanee Oil & Gas Co.	12	104
Laurel Oil & Gas Co.	16	104
Lorraine Petroleum Co.	15	377
Midland Oil Co.	6	130
Mid-Kansas Oil & Gas Co.	23	1,300
Peters & Oliphant	1	105
Phillips Petroleum Co. and Delmar Oil Co.	14	7,281
Phillips Petroleum Co.	44	4,980
Phillips Pet. Co. and Skelly Oil Co.	161	8,121
Prairie Oil & Gas Co.	90	1,701
Producers & Refiners Corp.	23	971
Roxana Petroleum Corp.	57	980
Simons, Moore et al	23	510
Sinclair Oil & Gas Co.	144	7,459
Skelly Oil Co.	14	1,857
Tidal-Osage Oil Co.	42	1,979
Twin State Oil Co.	8	225
Total	1,182	66,304
Total last week	1,176	67,170
Difference	6	2,104
Kay County Extension—		
George S. Bole	2	90
Carter Oil Co.	3	3,671
Comar Oil Co.	10	2,341
Coelen Oil & Gas Co.	14	2,979
Gypsy Oil Co.	17	3,079
Laurel Oil & Gas Co.	1	17

Gives to Rotary Holes the Same Advantages the *Spiral Stem* Gives to Cable Tool Holes

TIFOCO Special Rotary Drill Collar Offers 7 Advantages Never Enjoyed Before—A New Tool of Tremendous Importance



At one stroke the TIFOCO Special Rotary Drill Collar presents 7 distinct and important advantages in rotary drilling.

The pictures tell the story. Thru the center of the Spiral Rotary Drill Collar has been drilled a water course, which leads the mud-laden fluid to the fish-tail bit or other tool that may be used for drilling. Return passage for fluid is thrue openings formed by Spiral Wings between protective casing and central core, permitting passage for that portion of the fluid which does not pass between walls of hole and outside of protective casing.

Every one familiar with drilling will at once see the advantages, foremost among which are these:

1. The Rotary Spiral Drill Collar practically fills the hole, forming a positive guide in the drill hole, and preventing it from going crooked.

2. Being LIGHTER and more FLEXIBLE than solid drill collars of same dimensions, all the advantages of the solid drill collar have been gained without the danger of breaking the stem due to fatigue experienced in the solid drill collars.

3. By selecting correct size Spiral Rotary Drill Collar, a hole that has already gone crooked can be straightened.

4. The walls of the hole will be better plastered by Spiral Rotary Drill Collar than by Plain Drill Collar.

5. The Spiral Rotary Drill Collar insures full size hole because its size will prevent its entrance into oblong hole.

6. The Rotary Spiral Drill Collar is practically everlasting, because the outer protective casing and the saw-tooth casing shoe are easily renewable.

7. Spiral Rotary Drill Collar will reduce pumping cost when well is put to pumping, because a hole drilled with the aid of this collar is straight and more nearly vertical. Thus the cutting of tubing by sucker rod is greatly reduced.

The most enthusiastic boosters of the Spiral Rotary Drill Collar are the drillers who use it. We invite you to make a full investigation in order to convince yourself that every claim made for this important new improvement in rotary drilling will be borne out in actual operation. Write for further details.

TIFOCO products are distributed by all branches of the Continental Supply Co., the Republic Supply Co. of Los Angeles, Cal., and for export by the Continental Well Supply Co., Inc., 2 Rector St., New York. Mid-Continent representative, L. S. Allen, 311 W. First St., Tulsa. Representative in Colorado and Wyoming fields, L. E. Nebergall.

Titusville Forge Company

Titusville, Pa.

SPIRAL STEM *for cable-tool drilling*

SPIRAL ROTARY DRILL COLLAR *for rotary drilling*

Phillips Petroleum Co.	26	8,219
Mid-Kansas Oil & Gas Co.	9	4,376
Prairie Oil & Gas Co.	3	1,059
Pure Oil Co.	4	479
Roxana Petroleum Corp.	4	943
Dye, Tomlinson et al	8	976
Skelly Oil Co. and Phillips Petroleum Co.	18	1,356
Sinclair Oil & Gas Co.	3	1,056
The Texas Co.	16	3,439
Twin State Oil Co.	12	3,122
Total	161	42,896
Total last week	152	44,735
Difference	9	1,839
Total Burbank	1,343	107,830
Total last week	1,328	111,863
Difference	15	4,033

Daily average pipe line runs from the field were as follows: Gulf Pipe Line Co., 23,136 bbls.; Cosden Pipe Line Co., 8,196 bbls.; Kay County Gas Co., 14,444 bbls.; Osage Pipe Line Co., 2,549 bbls.; Oklahoma Pipe Line Co., 16,372 bbls.; Prairie Pipe Line Co., 8,885 bbls.; Sinclair Pipe Line Co., 8,685 bbls.; Moore Refining Co., 4,557 bbls.; Empire Pipe Line Co., 1,560 bbls.; Magnolia Pipe Line Co., 7,183 bbls.; Ozark Pipe Line Co., 3,646 bbls. Runs to storage were: Mid-Kansas Oil & Gas Co., 6,247 bbls.; Twin State Oil Co., 2,122 bbls.; Skelly Oil Co., 248 bbls. Total, 107,830 bbls.

Daily average production in the Tonkawa Field for the week ended April 16 was as follows:

Company—	Wells	Bbls.
Amerada Petroleum Corp.	36	1,997
Blackwell Oil & Gas Co.	31	1,340
Carter Oil Co.	6	149
Champlin Refining Co.	3	56
Champlin Refining Co. & Twin State Oil Co.	1	10
Comar Oil Co.	312	14,954
Cosden Oil & Gas Co. & Marland Refining Co.	16	485
Gypsy Oil Co.	91	5,668
Healdton Oil & Gas Co.	25	1,703
McCaskey & Wentz	44	2,209
McMan Oil & Gas Co.	3	21
Pennok Oil Co.	26	1,462
Phillips Petroleum Co.	4	438
Prairie Oil & Gas Co.	13	647
Sinclair Oil & Gas Co.	1	15
Slick-Comar Oil Co.	31	3,741
Southwestern Petroleum Co.	15	684
The Texas Co.	5	26
White Eagle Oil & Ref. Co.	7	479
Total	669	36,084
Total last week	664	35,496
Difference	5	588

Daily average pipe line runs from the field follow: Kay County Gas Co., 12,221 bbls.; Ozark Pipe Line Co., 7,945 bbls.; Gulf Pipe Line Co., 4,779 bbls.; Champlin Refining Co., 6,672 bbls.; Bolene Refining Co., 1,169 bbls.; Prairie Pipe Line Co., 647 bbls.; Enid Oil & Pipe Line Co., 1,613 bbls.; Oklahoma Pipe Line Co., 149 bbls.; Empire Pipe Line Co., 889 bbls. Total. 36,084 bbls.

In Tonkawa Field

In the Tonkawa Field, the Amerada Petroleum Corp. was cleaning out its old well, No. 23 Woods, SW cor. NE, Section 34-25-1w, at 2,688 feet. The same company's No. 32 Woods, SE cor. NW NE, same section, was good for 45 bbls. natural from sand at 2,445-2,514 feet. The Pennok Oil Co. was rigging up standard tools at 3,323 feet in its old well, No. 7-A Endicott, CNL NE SW SE, Section 34-25-1w.

On the Noble County side, the Comar Oil Co.'s No. 3-A Blubaugh, CWL NW SE, Section 2-24-1w, was a 400-bbl. well, natural, from sand at 2,210-15 feet. Tools were moved out and the rig was down for No. 7-A Blubaugh, SW cor. NE, same section. No. 8-ABlubaugh, CSL SE NW SE, same section, was good for 183 bbls. natural from sand at 1,862-77 feet; No. 10 Blubaugh, CWL SW SE, same section, made 290 bbls. natural from sand at 1,876-84 feet. The same company was rigging up its No. 15-A Ellsworth, CSL NE, same section. No. 8-C Ellsworth, SW cor. NW NE, same section, produced 100 bbls. from sand at 2,202-18 feet.

In Section 3-24-1w, the Comar Oil Co. was rigging up its old well, No. 4 Carmichael, NE cor., at 2,560 feet. The Healdton Oil & Gas Co.'s No. 14-A Rence, CNL NE SW NW, Section 11-24-1w, was swabbing 25 bbls. from sand at 2,098-2,109 feet, with total depth at 2,115 feet, and was to drill deeper.

Busy in Burbank

Work was going ahead at a lively clip in the Burbank area. The Phillips Petroleum Co. was drilling at shallow depths in 13 of its 16 new wells in the southwest quarter of Section 11-27-5, one of the "million-dollar-row" leases, secured at the latest auction. It was rigging up at the three remaining locations. In the extension several producing wells were secured. The Carter Oil Co.'s No. 2 Pappan, CSL SE SW NW, Section 3-27-5, was a 132-bbl. natural well, after getting sand at 2,852 feet, gas at 2,860 feet and oil at 2,897 feet with bottom at 2,900 feet. The Texas Co. had four new producers on the Munroe lease in the southwest quarter, same section. No. 10, CSL SW SE SW, got oil and gas at 2,905 feet, total depth 2,933 feet, was given a 60-quart jolt from 2,910-30 feet and made 700 bbls. No. 14, C NE SW SW, got oil at 2,920 feet and at 2,950 feet was making 200 bbls. naturally. No. 15, C NW SE SW, was making 1,000 bbls. natural flow, from sand topped at 2,918 feet, oil at 2,930 feet and total depth 2,961 feet. No. 16, C SW NE SW, made 45 bbls. in three flows with first oil at 2,968 feet and total depth 2,981 feet.

The Phillips Petroleum Co. was swabbing 250 bbls. from No. 12 Taylor, CNL NW NE NE, Section 9-27-5. Oil sand was found at 2,898 feet and total depth was 2,941 feet. The Prairie Oil & Gas Co.'s No. 4 Hobson, C NW SE NW, Section 9-27-5, was shot with 40 quarts from 2,947-63 feet and was making 50 bbls. and a little water after plugging back to 2,964 feet. The Phillips Petroleum Co.'s No. 17 Taylor was good for 500 bbls. naturally from oil sand topped at 2,910 feet. The Cosden Oil & Gas Co. shot three old wells on the sands lease; No. 1, SE cor. SE NW, Section 10-27-5, making 534 bbls. after a 25-quart shot at 2,942-67 feet; No. 2, CSL SW NE SW, same section, making 659 bbls. after a 17-quart shot at 2,951-81 feet, and No. 12, CEL NE SE NW, same section, making 218 bbls. after a 25-quart shot at 2,933-58 feet. The Pure Oil Co.'s No. 2 McCassey, NE cor. Section 16-27-5, an old well, made 350 bbls. after a 10-quart shot at 3,057-67 feet.

Hominy District

The Hominy district was showing a large amount of work. The Superior Oil Corp. had timbers on the ground for No. 3, CEL SW, Section 3-23-8, and was spudding No. 1, SE cor. SW, Section 20-23-8. The Red Bank Oil Co. was spudding No. 2, CEL SE SW, same section. The Marland Oil Co.'s No. 3-A, SW cor. SE, same section, made 10 bbls. after a 20-quart shot in shallow sand at 930-35 feet, while its No. 4, CSL SW SE, same section started at 32 bbls. per hour from pay at 2,809-11 feet. The same company's No. 5-A, CWL SW SE, same section, was finished for 20 bbls. after a 20-quart shot at 872-77½ feet, and No. 6, CWL NW SE, same section, flowed at the rate of 98 bbls. per hour from pay at 2,750-55 feet.

The Red Bank Oil Co. was building a rig for No. 5, C NE NW, Section 29-23-8. The Riverland Oil Co.'s No. 1, CNL NE NW, Section 23-22-8, swabbed 90 bbls. after plugging back to 2,856 feet, and Thompson, Black and others were swabbing 55 bbls. from No. 2, CNL NW NE, Section 29-22-8, producing from Oswego lime at 1,950-55 feet.

The Rex Pyramid Oil Co.'s No. 7, CEL NE, Section 26-23-10, was a 1-bbl. well after shooting formation from 1,717-30 feet with 100 quarts. The same company was rigging up No. 2, CNL NW, same section, Heggem & Davis were spudding No. 14, CWL SW SW, Section 35-23-10. The Atlantic Oil Producing Co. was rigging up to drill deeper in No. 2, CNL SE, Section 9-22-9, which had been shut down at 2,344 feet for a long time. The Tidal Osage Oil Co. was spudding No. 38, CSL SE NW, Section 34-22-10, and the Marland Refining Co. got a duster in No. 1-B, NW cor. SE, same section, abandoning it at 2,450 feet.

Breene, McKenney and others No. 1, CWL NW, Section 5-21-11, made 70 bbls. in 19 hours from the second break at 2,237-81 feet. Titus, Norris and Bird's No. 6, SE cor. NE, Section 6-21-11, swabbed 30 bbls. from pay sands at 2,249-50 and 2,278-90 feet. The Barnsdall Oil Co. had a rig up at No. 18, SW cor. Section 29-21-12 and was building a rig at No. 25, CNL NW NW, Section 9-20-12. The Devonian Oil Co.'s No. 2 C NE SW SW, Section 17-20-12, was spudding, and several additional wells were being drilled at shallow depths.

In Washita County, the Little Red Oil Co. abandoned No. 1 Wilkins, SW cor. NE, Section 20-8n-16w, after drilling to 3,250 feet.

Beckham County

In Beckham County, Kouri and others were waiting for the 6-inch to set at 1,003 feet in No. 1 Tatty, SW cor. NE, Section 36-8n-22w. Stratton and others abandoned No. 1 Kelly, C NE NE, Section 10-8n-21w, calling it dry at 3,012 feet.

The Continental Oil Co. and the Prairie Oil & Gas Co. shut in No. 1, NE cor. SE, Section 5-23-9, as a 3,000,000-foot gasser, after gas broke through the 10-inch, with the total depth at 2,224 feet. The Owen Osage Oil & Gas Co.'s No. 7, CSL N half N half, Section 17-23-11, was shut in for 5,000,000 feet of gas from sand at 2,073-77 feet. The same company was moving in tools for No. 2, CEL SW SW NW, same section. John Essley and others got the big line at 1,096-1,106 feet which made 100 bbls. on the pump in No. 3, NW cor. NE, Section 8-22-11. The Midland Oil Co. got a bad hole at 1,700 feet and went back for oil at 1,530-1,600 feet in No. 14, SW cor. NW NE, Section 19-22-11. It swabbed 60 bbls. and will be tubed and pumped.

In Pawnee County, the Carter Oil Co.'s No. 3, NE cor. Section 17-20-8, started at 55 bbls. after a 20-quart shot in pay at 3,030-52 feet. The Galvey Oil Co. had a rig up for No. 2 Van Eman, NW cor. SE NE, Section 17-20-7. The Southwestern Oil Fields Co. had a well good for 150 bbls. with sand at 2,734-42 feet in No. 10, CEL SE SE NW, Section 24-20-8.

In southern Osage County, Franchot & Moore plugged back to 2,307 feet and shot from 2,288-2,302 feet with 40 quarts for a 6-bbl. well in No. 4, NW cor. SW NW, Section 11-21-9. The Knupp Oil Co.'s No. 1, SE cor. NE, Section 18-21-10, started at 70 bbls. after a 60-quart shot in Bartlesville sand at 1,969-80 feet. Breene, Markham & McKinney's No. 1, CEL SE NE, Section 22-21-10, made 300 bbls. after a shot of 110 quarts in Pure sand at 1,587-1,611 feet. Their No. 4, CWL NW, Section 23-21-10, was good for 400 bbls. after a 110-quart shot at 1,570-98 feet. The Gardner Petroleum Co.'s No. 4, C NE SW NW, Section 34-21-10, was dry at 2,559 feet.

In Payne County, the Home Gas Co. had a rig up at No. 1 Hawk, CWL SW SW, Section 35-19-5, and the same company was spudding No. 1 Bass, CSL SW NW SE, Section 30-18-6.

Martin & Sewell had a machine for No. 2 M. Haynes, NW cor. SW SW, Section 12-17-15, Wagoner County. The Center Oil Co. had a rig on the ground for No. 1 Grayson, NW cor. Section 19-17-15.

Coweta Field

In the vicinity of the recently discovered Coweta shallow gusher, operators were getting work under way with a rush. Upwards of a dozen wells were

(Continued on Page 109)

COMPLETIONS AND OPERATIONS REPORTED IN OKLAHOMA FIELDS

By C. D. Lockwood

In Southern Pawnee County, the Prairie Oil & Gas Co. has 3,500,000 feet of gas in its No. 5 Donahue, SW cor. Section 15-20-6, at 2,796-2,852 feet. The Elmar Oil Co. had a rig up for its No. 3, CWL NW SW, Section 16-20-6. Haley, Garber & Pulse were rigging up their No. 1, SW cor. Section 14-20-5, and the Privitt Drilling Co.'s No. 1 Conley, SW cor. SE, Section 1-20-5, was down 460 feet. The Johnson Oil & Refining Co. was drilling at 500 feet in its No. 1 Van Eman, SE cor. SW NE, Section 17-20-7, and Miller & Gowland were spudding their No. 1, NE cor. Section 18-20-7, at 175 feet, after repairing boiler. Rigs were in place for C. H. Burton's No. 3, CWL NE SE, Section 25-20-7; Griffith and others' No. 2, CEL NW SE, same section; and the Southwestern Oil Fields Co.'s No. 8, CEL NW, Section 24-20-8, formerly reported erroneously as drilling at 2,538 feet. The same company's No. 10, CEL SE SE NW, same section, was shut down at 2,722 feet. The Tidal-Osage Oil Co.'s No. 2 Hennessey, CEL NE NE SW, same section, was drilling at 2,560 feet.

Black & Breslyn shot their No. 4 CSL NW NW, Section 30-20-8, with 50 quarts in sand at 2,453-73 feet and it produced only 10 bbls. afterward.

A duster was abandoned at 2,556 feet by the Mutual Oil & Gas Co. in their No. 5, Lot 66, CEL SW SE NE, Section 25-20-9.

The Riverside Oil & Refining Co. was drilling at 2,080 feet in its No. 1-A Green, SE cor. NW, Section 36-21-8, a twin to No. 1.

New Work in Creek County

In northern Creek County, the plugging of two failures was offset by considerable new work. The Shaffer Oil & Refining Co.'s No. 3-A Smith, NE cor. SW, Section 15-19-9, was abandoned as dry at 2,769 feet, and G. W. McKinney was drilling at 350 feet in his No. 3 Morgan, SE cor. SW NE, same section. The Shaffer Oil & Refining Co. was fishing for tools at total depth of 1,406 feet in its No. 6 Smith, CEL NW NW SE, same section. H. U. Bartlett was spudding No. 1 Tiger, NE cor. Section 8-18-9, and the H. F. Wilcox Oil & Gas Co. plugged its No. 1 Taylor, NW cor. NE SW, Section 5-18-9, as a duster at 2,694 feet.

The Transcontinental Oil Co. was spudding its No. 1 Stidham, CEL NW NW SE, Section 21-17-8, and the Waite Phillips Co. had a rig on the ground for its No. 2 Grayson, NW cor. NE NE, Section 23-17-8.

A fine producer was brought in by the Prairie Oil & Gas Co. in its No. 4 Pitman, CEL NE NW NW, Section 5-16-8, which was good for 1,170 bbls. the first 24 hours and 1,070 bbls. the second day, from sand at 3,447-82 feet. The same company was spudding its No. 6 Pitman, SE cor. NE NW, same section. The Olean Petroleum Co. was also spudding No. 3, NE cor. Section 6-16-8.

A rapid decrease in production was noted in the Red Bank Oil Co.'s No. 6-A Meyers, SE cor. SW SW, Section 9-16-8, which came in for 820 bbls. natural from sand at 3,537-3,640 feet, with first oil at 3,572 feet. After a shot of 260 quarts, the second day's production was 500 bbls., the third day's output was the same amount, and the fourth day it made 450 bbls.

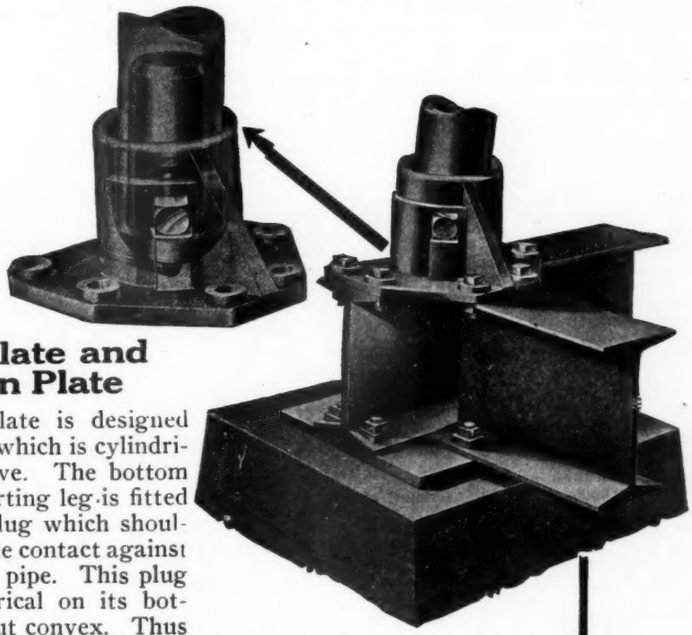
Considerable new work was going on near the Laurel & Cortez gushers in Section 22-16-8. The Cortez Oil Corp.'s No. 5 Wilson, NE cor. NW, was spudding, and rigs were in place for the Laurel Oil & Gas Co.'s No. 6 Knoll, CWL SW NE SW, and No. 7 Knoll, CEL SE NW SW, same section. The Peters Oil Corp. found water at the bottom of the sand in its No. 1 Arsoyales, SE cor. SW NW, Section 22-16-8, at 3,135 feet and plugged back to 3,133 feet where it was making 65 bbls. from the sand topped at 3,127 feet. The oil was being cut 3 per cent. The Lorraine Petroleum Co. was spudding its No. 12 Deere, CWL NW NE, Section 23-16-8, and a rig was in place for the H. F. Wilcox Oil & Gas Co.' No. 9 Harjo, NE cor. SW SW, Section 35-16-8. The Prairie Oil & Gas Co. also finished the rig for its No. 3 Roberts, NW cor. SW NW, Section 31-17-9.

A 4,000,000-foot gasser was shut in by the Ryan Consolidated Petroleum Co. in its No. 1 Charles, SE cor. NE NE, Sec-

(Continued on Page 131)

STEEL SUPERIOR DERRICK

One of the Distinctive Features of Superior Steel Derricks



Foot Plate and Crown Plate

The foot plate is designed with a socket which is cylindrical and concave. The bottom end of the starting leg is fitted with a solid plug which shoulders in complete contact against the end of the pipe. This plug is also cylindrical on its bottom surface but convex. Thus complete surface contact is obtained between the starting leg and the foot plate, and an even distribution of the load throughout the entire perimeter of the pipe leg section is constantly maintained.

Castings identical to the foot plate are used as crown plates, each top leg section, however, being fitted with a crown sleeve with cylindrical end similar to the plug used in the bottom of each starting leg.

Ask the driller who has used one

SUPERIOR TUBE COMPANY

Steel Derricks Casing Tubing Line Pipe

Kansas City, Mo.

Pittsburgh Tulsa St. Louis Dallas Casper

California Field Operations

By L. P. Stockman

Dominguez slowly increasing production in orderly fashion. Union's No. 2 Hellman, its second producer, does 1,410 bbls. Its No. 1 Rosecrans drilled out but for fifth time fails to secure water shut off. Chanslor-Canfield Co.'s No. 37 Torrance makes 1,074 bbls. Ramsey's No. 3-B Municipal, Long Beach, 1,850.

LOS ANGELES, Cal., April 19.—Dominguez, California's most recent field, although the discovery well was brought in several months ago, is slowly but surely increasing its production. The Union and Shell Oil companies, controlling practically all of the proven area at the present time, are developing it in an orderly and systematic manner. For this reason there has not been and will not be any over development or hysterical drilling, and as a result the increase in production from month to month will be gradual. The Union increased its list of producers in this field during the early part of the week by bringing in No. 2 Hellman, its second successful producer on this lease, after drilling it to 4,235 feet. It was finished with a 6¼-inch oil string, including 517 feet of perforated casing and started off doing 1,410 bbls. of clean 31.6 gravity oil. Shortly after the Union finished No. 2 Hellman, the Shell's No. 2 Reyes started on a rampage. It has been throwing mud, rocks, oil and water over the crown block for nearly a week, after getting away from the crew. It was drilled to 4,314 feet and because of its violence and the action of the sand on the casing, the Shell will probably lose this hole. During the latter part of the week the Union tried to duplicate the Shell's performance by allowing No. 2 Callender to get loose. The well has also been sprinkling the vicinity with oil and it has been estimated that 3,000 bbls. were lost during the first day. Both will probably be put under control within a few days.

With the exception of the completion of No. 2 Hellman and the blowout of No. 2 Reyes and No. 2 Callender the most interesting developments in this new district are perhaps the operations of Davis & McMillan, C. C. Julian, Chase Oil Co. and the General Petroleum Co. Davis & McMillan have passed the 5,000-foot level and, while their well, together with the Chase Oil Co.'s No. 1 at 4,700 feet, will probably be dusters, they are quite interesting because of their depths and location in the field. Julian is temporarily held up at 4,861 feet because of a fishing job, while another deep well, the Fresno Petroleum Co.'s No. 1, has been suspended at 4,811 feet.

On Edge of Production

The several leases of the General Petroleum Co. seem to be just on the edge of the producing zone. So far this company has only been successful in completing one well, No. 1 Gardena, which is pumping a little better than 125 bbls. a day. The General Petroleum's operations are of particular interest at present because the three wells being drilled by this company in the extreme southern part of this lease adjoining the Union Oil Co.'s property will prove or disprove the productive limits of the area in this direction. All three of the General Petroleum Co.'s leases, Austin, Gardena and White, adjoin the Union Oil Co.'s properties on the north. The former's No. 1 Gardena, a small pumper, which appears to have encountered edgewater, is the only producer on these three leases, notwithstanding the fact that No. 1 Austin shows over 5,200 feet of hole and No. 1 White 4,700 feet. The Shell Oil Co. is building three new rigs for wells Nos. 5, 6, and 7 on the Reyes lease, while the Union is building derricks for wells Nos. 5 and 6 on the Callender lease. No. 5 on the Hellman lease and No. 2 on the Carson lease.

The Union drilled out its No. 1 Rosecrans, which is a few miles north of Dominguez, and for the fifth time failed to secure a water shutoff. If this well is ever brought in as a commercial producer it will be due only to the untiring efforts of the company's efficient field staff. Four attempts were made to secure a shutoff by recementing at 3,926 feet and when unsuccessful the company drilled ahead 10 feet and set another string of casing, 6¼-inch. The latter cement job has just proven wet and another attempt will be made to set the 6¼-inch some time during the next few days. In No. 1 Potter, which will be known in the future as No. 1 Athens, the Union secured a slight showing and, although it did not look as though it will result in production, the company has, nevertheless, set a string of 8¼-inch.

Rosecrans Difficulties

The failure of the Union to successfully overcome the troublesome water condition which has held up the completion of No. 1 Rosecrans for several months, has not caused the company to lose faith in this district. The Union is satisfied that this well will result in commercial production as soon as the water can be excluded and is determined to thoroughly prove up the immediate area. The company has just staked three new locations nearby and No. 1 Zins, No. 1 Hursey and No. 1 Chandler will be spudded in shortly. Although the Union was actually the discoverer of this new prospective field, there is a probability that another company may be the first to actually secure production. The Superior Oil Co.'s No. 1 Maxwell at 1,100 feet and well No. 23 of the United States Royalties at 1,885 feet are making good progress and may reach the productive stage before the Union's No. 1 Rosecrans.

There is another good looking area in addition to Rosecrans where water has proved to be a very troublesome factor. Over at Bandini, the Oakridge Oil Co. has been having its own troubles with water and it begins to look as though the company has finally been successful after cementing its wildcat, No. 1 Rossi four times. This well is 4,730 feet deep and it has been bailed for the first time to 3,000 feet. If a shutoff has been secured it will be put on a production test immediately as the outcome of three other wells depends upon its showing. These two areas, together with Inglewood, appear to be the most favorable for immediate future production. The only showing of importance, however, in the latter district was that found in the Standard Oil Co.'s No. 1 Los Angeles Investment at the extremely shallow depth of 1,027 feet. Notwithstanding the fact that the Standard paid $500,000 for an additional lease many believe that the territory is dry.

San Joaquin Valley

There is still a large amount of drilling being done in southern California, but nevertheless operators in the San Joaquin Valley have begun to develop their properties after a layoff of over two years. The number of permits for the drilling of new wells and the deepening of others has been increasing each week and the operations are not confined to any one or two districts but are general throughout the valley. During February there were 15 new wells completed in this area, and, judging by the number of permits issued by the State Mining Bureau recently, this figure will begin to increase within the next month or two. It will take some little time, of course, between the issuance of a permit and the completion of the well. The number of new wells completed in the valley should begin to increase from now on and by late summer all districts should be contributing their share.

There are not very many new wells being drilled in Kern River and the only completion during the past few weeks was a 10 bbl. producer brought in by J. E. Grey on Section 3-29-28. There will probably not be any unusual amount of development in this field but, with practically all of the producing wells opened up, conditions are returning to normal.

Maricopa has responded very nicely to higher prices and in addition to the 28 wells drilling at present, rigs have been erected for 10 more. These figures should be substantially increased during the next few months and will result in the completions of a larger number of new wells. The Formax Oil Co., in addition to completing Nos. 8 and 14 on Section 36-32-23, spudded in No. 15. No. 8, a comparatively shallow well drilled to 1,205 feet, was good for 75 bbls. a day, while No. 14, finished at 1,060 feet, was a 20-bbl. pumper. The best well finished in this district during the past few weeks was the General Petroleum Co.'s No. 2 located on Section 33-32-23. This well, a 250-bbl. pumper from 1,031 feet, is located on the old Midway Oil Co.'s property recently acquired by the General Petroleum Co.

Elk Hills District

Development work in the Elk Hills district, while limited to the operations of the Associated, Belridge, Pacific, Pan-American, Standard and Union Oil companies, is improving slowly. The Pacific completed a nice well on Section 25-30-24 two weeks ago and later spudded in another on Section 30-27-24. The company's completion was No. 49, a 550-bbl. producer completed at 3,270 feet.

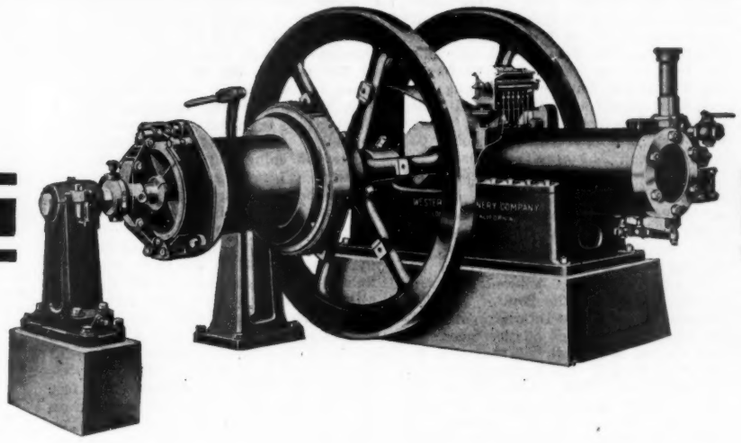
At Wheeler Ridge, the Standard Oil Co. is making good progress with No. 9, which is being carried down for a deep test and shows 251 feet of hole. On this same lease, Section 28-11-20, the company finished No. 8 at 2,727 feet and put a 10-bbl. pumper on production. The Standard is spudding in No. 12, while the General Petroleum Co. is rigging up No. 3 Gillian, following the recent completion of No. 2 as a 50-bbl. pumper, and should begin drilling shortly.

Midway has probably responded quicker to changing conditions than any other field in the San Joaquin Valley and as a result will show a larger production and increased development work. The Southwestern Petroleum Co. finished its third well on Section 2-31-22, spudded in well No. 4 and erected a rig for well No. 5. The Southwestern's No. 3, which was good for 165 bbls. of 17.6 gravity oil, was finished at 1,045 feet. The Midland Oil Fields (California Petroleum) finished one of the best wells completed in this field for several weeks. Well No. 5, on Section 24-31-23, completed at 3,406 feet, was good for 750 bbls. a day of clean 27.1 gravity oil. The Chanslor-Canfield Midway Oil Co. contented itself with three comparatively small wells, No. 33, on Section 22-31-22, No. 19, on Section 25-31-22, and No. 2 on Section 27-31-22. The first two wells were good for 25 bbls. each, while the latter pumped a little less than 10 bbls. The Buena Vista Oil Co., operating a Government lease, on Section 32-31-24, completed No. 7 at 3,610 feet and brought in a 175-bbl. pumper of 25.4 gravity oil. Many of the wells which were closed in at Midway during the recent overproduction of the flush pools in Los Angeles County have been opened up and, except for the General Petroleum, Standard and a few others, there is very little production shut in. A great many of the wells at Coalinga have also been turned to production and only the Union and Pacific Oil companies have any production of any consequence closed in. The Shell has been working on its wells for the past several months and, while many of them have had a tendency to sand up upon being returned to production, this difficulty is being rapidly overcome. Coalinga should show a very substantial in-

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Following is a list of tankers, date departed, destination, kind of cargo and amount in barrels:

Agwilake, April 7, New York, crude	85,286
District of Columbia, April 8, New York, crude	69,960
S[illegible]n, Sun, April 8, Philadelphia, crude	76,425
Robert E. Hopkins, April 9, New York, crude	72,879
Ira W. Weiler, April 10, New York, crude	114,601
Watertown, April 10, Boston, crude	73,960
Agwibay, April 10, New York, crude	93,321
Durango, April 11, New York, crude	70,593
Wm. G. Warden, April 12, New York, crude	113,014
David McKelvy, April 13, New York, crude	73,106
Coastwise	
Teton, April 7, Seattle, fuel	72,079
Richmond, April 8, Seattle, fuel	6[illegible],389
La Purisima, April 10, San Diego, refined	11,412
Mojave, April 10, Portland, fuel	70,306
Los Alamos, April 11, Seattle, refined	32,761
W. S. Miller, April 12, Willbridge, fuel	71,715
La Purisima, April 12, Seattle, refined	22,941
Ulaceabon, April 13, Martinez, crude	73,438
Exports	
Tachibana Maru (Jap), April 7, Japan, fuel	60,701
Vancolite (Br.), April 7, Chile, fuel	81,422
Oliva (Br.), April 7, China, refined	52,945
Cadillac (Br.), April 8, England, refined	132,472
El Lobo (Br.), April 9, Japan, fuel	41,791
Liberolite (Br.), April 11, Chile, fuel	75,696
Mina Brea (Br.), April 11, Vancouver, crude	42,333
From San Francisco	
Levant Arrow, April 7, Karachi, refined	72,119
Capt. A. F. Lucas, April 8, Seattle, refined	31,569
[illegible] Barrow, April 8, Honolulu, fuel	47,954
W. S. Porter, April 8, Seattle, fuel	51,607
El Segundo, April 9, Point Wells, refined	27,162
S. C. T. Dodd, April 10, Point Wells, refined	76,814
Argon, April 11, Japan, fuel	73,481
F. H. Hillman, April 13, London, refined	108,715
Standard Arrow, April 13, Hongkong, refined	92,504
From Port San Luis	
Hoven, April 8, Portland, fuel	71,694
Stockton, April 14, Manila, fuel	76,565



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"WESTERN"

crease in production during the coming month.

Torrance

The number of completions at Torrance showed a slight falling off from the previous week, which was unusually large, but the field production, nevertheless, continued to gain. The Chanslor-Canfield Midway Oil Co. shared honors with the Shell in the number of wells completed but had a slight edge in the aggregate initial production. The former's No. 37 Torrance, drilled to 3,720 feet and finished with an 8¼-inch oil string including 250 feet of Smith screen, was good for 1,074 bbls. of 26.3 gravity oil, while No. 39 Torrance, drilled to 3,730 feet and also finished with an 8¼-inch oil string, was good for 580 bbls. of 26.1 gravity oil. Both wells are flowing through ⅝-inch beans, the former under a pressure of 360 pounds and the latter 280 pounds. The company has several more wells on its Torrance lease nearing completion and No. 30 Torrance, standing cemented at 3,625 feet, No. 40 at 3,745 feet and No. 42 at 3,345 feet should be on production shortly. On the Kettler lease the company is preparing Nos. 10, 11 and 12 for production and will probably begin swabbing operations on No. 15 within a day or so.

The Shell's two new wells were both on the Kettler lease and their combined production totaled 1,610 bbls. No. 3 was drilled to 3,877 feet and finished with a 6¼-inch liner including 350 feet of mesh screen, while No. 4 was drilled to 3,883 feet and finished with an 8¼-inch liner including 300 feet of mesh screen. Both wells are flowing through ½-inch beans, the former producing 885 bbls. of clean 20.5 gravity oil daily, while the latter is tanking 725 bbls. of clean 20.2 gravity oil. The pressure on each is approximately 550 pounds. The Shell has several additional wells on this lease drilling below the 3,000-foot level and probably No. 5, finished at 3,880 feet, will be the company's next producer.

George F. Getty was also successful in finishing two wells but only one of them was of any consequence. Getty's biggest well, and the first one of any importance he has completed in this field, was No. 21 Torrance, drilled to 3,790 feet and finished with a 6¼-inch oil string landed on bottom. It came in flowing 500 bbls. a day of 20.2 gravity oil, which showed a cut of nearly 20 per cent. This well looks to be wet and, if correct, will probably be a good producer if it is recemented and the water successfully shut off. Getty's No. 19 Torrance was finished at the same depth as No. 21 Torrance, 3,790 feet, but only a small pumper was secured. On the beam, it is making 102 bbls. of clean 21.6 gravity oil.

Two Doheny companies appear on the weekly completion list, the Petroleum Securities and Pan American Petroleum. The former's well, No. 12 Marble, finished at 3,740 feet, is making 832 bbls. a day. It is flowing through a ½-inch bean under a pressure of 250 pounds, the oil being clean and testing 25.3 degrees. On this same lease the Petroleum Securities has eight other wells drilling below 3,000 feet, nearly all of which should be completed within the next 30 days. The Pan American duplicated its feat of last week by bringing in another good well on its Thomas lease, the production from which exceeded that of its predecessor. No. 1 Thomas, the company's latest completion, was drilled to 3,900 feet and when put on production made 852 bbls. during the first day. It is flowing through a ½-inch bean under a pressure of 330 pounds, the oil testing 19.1 degrees and showing a cut of 1 per cent.

Successfully Plugged

The Superior Oil Co.'s No. 13 Torrance, which was carried down to 4,696 feet in search of a deep sand, was successfully put on the beam after being plugged back to 3,856 feet and pumped 222 bbls. during the first 24 hours. The plug was apparently successful as the oil, which tests 19.6 degrees, shows a cut of only a little over 2 per cent. The Universal Oil Co. also plugged back a well, No. 1 Jones, and put it on the beam. The cement plug in the latter, which is pumping 96 bbls. of 18.7 gravity oil showing a cut of 1 per cent, was set at 3,774 feet. The Sentinel Oil Co., which ran into bottom water at 3,887 feet in No. 3 Joughin, was forced to plug back to 3,835 feet and after landing a 6¼-inch oil string allowed the well to flow through a ½-inch bean. It came in doing 635 bbls. of clean 22.1 gravity oil daily.

The Southern California Drilling Co. finished a fairly good well when No. 1 A. Hadley was put on production after being drilled to 3,800 feet. Two days after its completion, however, the production had dropped to less than 100 bbls. a day and it is believed that sand is interfering with the flow of oil. The Wermick lease of the International Drillers was productive of another good well and during the middle of the week the company finished No. 3 after drilling it to 3,820 feet. The completion of this new producer was held up for a couple of weeks because it was necessary to inch. The former froze at 3,750 feet but put in two liners, a 6¼-inch and a 4¼-the latter was later successfully landed on bottom. No. 3 Wermick, flowing through a ½-inch bean under a pressure of 400 pounds, is producing 500 bbls. of comparatively clean 21.2 gravity. The Southland Petroleum Co. finally succeeded in securing a satisfactory water shut off in No. 5 Torrance after several attempts and put it on production from 3,560 feet. The initial output of 483 bbls. tested 22.1 degrees and showed a cut of 5 per cent.

The York-Smullin Drilling Co. completed a 470-bbl. producer and presented the White Star Oil Co. with a fairly consistent well, No. 1 Empire. It was drilled to 3,810 feet and finished with a 6¼-inch oil string including 325 feet of mesh screen. Selby & Root completed a 250-bbl. producer from 3,783 feet and although the production is comparatively small it was unusually clean. This new producer, No. 5 Torrance, is flowing through a ½-inch bean under a pressure of 190 pounds, the oil testing 23.4 degrees. The Standard Oil Co. and the Empire Drilling Co. both completed wells but neither remained on production. The Empire's No. 3 McDonald will probably have to be put on the beam, while the Standard's No. 13 Torrance, which made 250 bbls. of crude in 10 hours, will have to be cleaned out before being finally listed as a successful completion.

Long Beach

There were several fairly good wells brought in at Long Beach within the past week but the field production, nevertheless, registered another decline. Ramsey's No. 3-B Municipal was by far the largest new well finished and it added 1,850 bbls. a day to his production. It was drilled to 4,175 feet and is flowing through a 1-inch bean under a pressure of 320 pounds, the oil testing 22.4 degrees and showing a cut of 3 per cent. The Trojan Oil Co. completed No. 2 Crest after redrilling and deepening it to 4,981 feet and this recompletion started off doing 750 bbls. It is flowing through a 1-inch bean under a pressure of 250 pounds and, although the output is of a good quality, testing 24.6 degrees, it shows a cut of 12 per cent. It is believed that it will eventually clean up. No. 1 Crest on the same lease was finished some time ago at 4,985 feet and, although there is only four feet difference in the depths of these two holes, No. 1 Crest is producing nearly three times as much oil. The West Coast Crude Oil Co. brought in a 500-bbl. well after redrilling and deepening it from 3,988 feet to 4,590 feet but could not keep it on production. It sanded up a short time after being finished and will be thoroughly cleaned out before being again turned loose.

The Petroleum Midway Co. recompleted two wells after redrilling and deepening them, No. 4 Davidson and No. 1 Fields. The former was deepened to 4,800 feet and was finished as a 180-bbl. pumper of clean 22.1 gravity oil. No. 1 Fields, however, when put on the beam pumped only 50 bbls. of fluid from 4,857 feet, over 30 per cent of which was water. It is not known just what action will be taken to overcome this water trouble in No. 1 Fields. There seems to be no possibility of exhausting it as the well has been on the beam for several days and the amount of water seems to be increasing rather than diminishing. The Mission Bell Oil Co. also experienced considerable trouble with water in its No. 1-A, recently finished at 4,250 feet. When put on the pump it made 100 bbls. of fluid, which showed a cut of 25 per cent. The oil is also of a rather poor quality, testing only 19.1 degrees, and it is possible that this well will be deepened to the 4,700-foot level in order to secure more satisfactory results. The Great Angelus Oil Co. finished a good well when its No. 1 was put on production during the early part of the week but the initial output of 600 bbls. suddenly dropped to 200 bbls. without any change being made in the size of the bean. Upon its completion, the output, which was clean and tested 25.6 degrees, was flowing through a ¾-inch bean under a pressure of 400 pounds.

The Shell Oil Co. will probably show three or four completions the coming week, as No. 3 Pickler, No. 4 Nicholson, No. 2 Cherry Hill and No. 3 Cherry Hill are all being prepared for tests. The Pan American is also finishing a well, No. 2 Betz and, although only a small one is expected, it will aid in offsetting a little of the decline in the older wells. The attempt of the Pan American to pick up a fourth sand has not yet been successful and it is believed the company's deep test, No. 1 Stone, which shows 5,470 feet of hole, will eventually be plugged back to the upper sands.

Santa Fe Springs

The most interesting development work at Santa Fe Springs during the past week was the completion of a good producer well by the General Petroleum Co. and the successful recompletion of an old well by the same company after plugging it back from the Meyer to the Bell zone. These two operations were by far the most important events recorded during the past seven days. The General Petroleum's No. 53-B Anderson was drilled into the gas zone and finished at 2,010 feet. The gas, which is dry, was needed for fuel and the 2,000,000 feet which this well is making daily can be used to advantage as the gas production from the company's No. 2 Santa Fe has declined very substantially. The latter well is making a little over 1,000,000 feet of gas per day from the 3,300-foot level. The General Petroleum's No. 91-A Santa Fe was the company's recompletion after being plugged back from the Meyer zone at 4,682 feet to the Bell zone at 3,900 feet. The casing was perforated from 3,690 feet to 3,800 feet to take care of the production from the Bell zone, 155 bbls. of clean 31.6 gravity oil. The Globe Petroleum Co. plugged back No. 2-B Brunson from the Meyer to the Bell zone and, although it flowed for a few hours, water broke in and it will require additional work. The Union Oil Co. is putting the finishing touches on No. 4 Bell and will probably put it on production within the next few weeks. The Standard Oil Co. finished one new well, No. 1 Watson, and cleaned out another, No. 6 Koontz, but neither resulted in large production. In No. 1 Watson the Standard drilled to 5,375 feet, over a mile, and only secured a 30-bbl. producer of 33.1 gravity oil, which will probably never pay for itself. The output from No. 6 Koontz, finished at 4,648 feet, was also small, 70 bbls. of 34.3 gravity oil.

Miscellaneous Drilling

In the Rideout Heights district, in the old Whittier Field, the O'Donnell Refining Co. cleaned out No. 5 and put it on the pump. For the first day or two it made 200 bbls. but soon dropped to a little less than 100 bbls. The Taylor-California Royalty Co. ran in the old Walter P. Temple well, originally drilled to 3,404 feet, and is cleaning out the hole to bottom. The Petroleum Midway is making satisfactory progress in the four wells it is drilling in this district, three being around the 2,500-foot level. There is nothing of importance at Anaheim where the Superior Oil Co., the Marland Oil Co. and the Standard Oil Co. are drilling tests. The latter company's No. 1 Wagner is still dry at 4,822 feet and gives promise of resulting in production. The Shell Oil Co. is building a rig near Bell to be known as the Loomis Community and will probably spud in some time during the next few weeks. The territory in the vicinity of El Segundo will soon be tested, if the reports emanating from the Pan American's well No. 1 Pacific Southwest are correct. This hole, which has been held up for some time because of a fishing job, has finally been cleaned out and the 8¼-inch will again be cemented at 3,670 feet. The Newport Petroleum Co.'s well No. 1 in the Newport district has been on the pump for the past several weeks but it is still producing about 98 per cent water from 4,260 feet and will probably not do any better under present conditions. The Petroleum Midway Co.'s Norwalk wildcat, No. 1 Neal, is drilling

(Continued on Page 113)

News from Fields of Canada

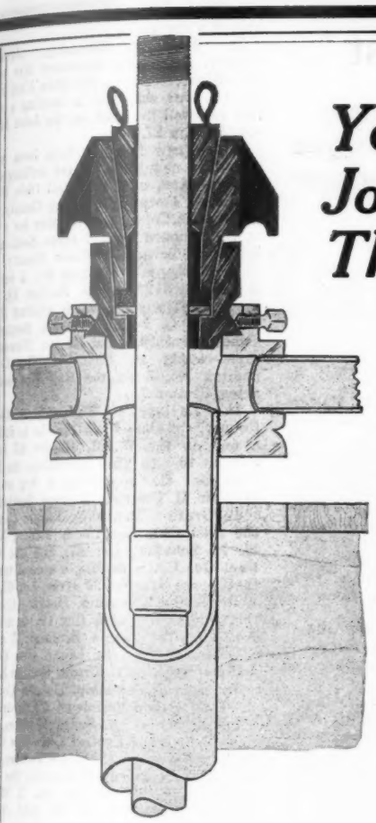
By Victor Lauriston

CHATHAM, Ont., April 19. — New work is being started by several companies in the Irma-Wainwright Field of east-central Alberta. Two rotary outfits brought in from Los Angeles by British Petroleums, Ltd., have reached Edmonton and are being moved to the field; and rigging up for two new tests close to British Petroleums, No. 2, Section 30-46-6w4 will be started before the end of April. These tests will probably be carried deeper than the British Petroleums No. 2. The latter was planned to drill below the gas sand encountered in No. 1 in the hope of getting a commercial oil production in the Dakota sand. No. 2 well, however, got some heavy oil in the bottom of the Benton shale, and when completed had not reached the Dakota horizon, where the main production was looked for. British Petroleums, Ltd., is planning to drill two tests simultaneously throughout the entire season.

Maple Leaf Oil Co. is bringing in 16,000 feet of derrick timber from Vancouver, B. C., for use in the Irma-Wainwright Field this spring. Several drilling crews are reported to have been already recruited by various companies with holdings in this area, and a number of drillers have arrived at Edmonton to start work. Some leases are changing hands, one 40-acre tract being taken over recently by Vancouver, B. C., interests at $25 an acre, the tract being about 3 miles northwest of the British Petroleums well. An 80-acre lease half way between Wainwright and the British Petroleums well sold for $50 an acre some time ago.

In southern Alberta, the Sarnia Oil & Gas Co. is reported to have a 30-house carbon black unit and gasoline extraction plant ready for shipment to Medicine Hat to be erected in the Many Island Lake Field.

In the Ontario fields, Eugene Coste & Co.'s No. 6 on the Malott farm, Tilbury East Township, Kenty County, is drilling in the Trenton limestone at 3,125 feet without a show. Union Natural Gas Co.'s No. 248, Truckenbrod farm, east of Port Alma, in Kent County, is drilling at 3,535 feet and has so far encountered nothing in the way of production, although it is several hundred feet in the Trenton.



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Mildren Tubing Support

The fact that this tubing support is fast coming into universal use is proof complete that it is meeting a real need of the oil industry. Because it is impossible at times to obtain the pup or short length joints on which to hang a string of re-inforced upset tubing; it is necessary to cut a thread on a nipple with ordinary stock and dies. On this joint is suspended the entire string of tubing, and it is subjected as well to the constant tugging caused by the polish rod.

Here is where the MILDREN TUBING SUPPORT proves to be positive insurance against mishap at low cost. This support eliminates all danger of dropping the tubing because of any accident occuring above the derrick floor,—such as:

Top Collar being pulled off due to constant tugging of Polish Rod.
Derrick being blown down.
Rig burning.

The Mildren Tubing Support is used advantageously in setting up collars when lowering tubing into hole and increases the factor of safety when it is necessary to set a packer.

The split rubber packing ring and the split steel ring at the base of the lower casting packs off all the fluid.

The illustration in upper left hand corner shows the Mildren Tubing Support when placed in casing head.

Exterior view of Mildren Tubing Support—as assembled.

1.—Upper Half. 2.—Lower Half. 3.—Slips. 4.—Split steel ring. 5.—Rubber packing ring.

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Fields of the Central West

By Whit

Hadley & Kelly's No. 3 Etzkorn, Marion Township, Allen County, pumps 50 bbls. U. S. A. Oil Co. gets fourth producer in Payne district of Paulding County, reported at 35 bbls. Omar Oil & Gas Co. and Chaney have completion estimated as 40-bbl. steady producer in Hotmire Pool, Indiana.

FINDLAY, Ohio, April 21.—Few completions are reported from the Central West fields during the week, owing to bad weather. The Western Kentucky Field leads in new completions, but few being made in eastern Kentucky. The Lima Field of northwestern Ohio, and the Central Ohio Field are the leaders in the north end of the big field, although the wells are rather light. The best completion in the Lima Field for the week was Hadley & Kelly's No. 3 on the Frank Etzkorn, Section 10, Marion Township, Allen County, which pumped 50 bbls. at a depth of 1,250 feet.

The test of the Dunbridge Oil Co., on the northeast corner of the L. C. Potter farm, in the southwest quarter of Section 1, Washington Township, Wood County, has been completed and drilled to a sufficient depth to give the lower formation of the Trenton a good test. A string of 820 feet of casing was put in the hole. The top of the Trenton was found at 1,576 feet, and drilled 153 feet in, to a total depth of 1,729 feet. The well had only a rainbow of oil and some salt water and was abandoned. In Lake Township, in the eastern part of Wood County, and south of Toledo, Lantz, Gregg & Schulte drilled in No. 5 on the Fred Schulte, Section 35, and have a 10-bbl. pumper at 1,300 feet. In Plain Township, Ralph Brothers' No. 11 on the J. F. McClung, Section 15, showed considerable salt water at a depth of 1,490 feet. This well is 50 feet north of old No. 5 on the same lease, and may make a producer when the water is somewhat exhausted. In Liberty Township, the Ohio Oil Co.'s No. 12 Levina Munn, Section 11, in the southeast corner of the farm, pumped 10 bbls. from a depth of 1,517 feet.

In Moulton Township, Auglaize County, Cliff Blair and others' second test on the Mrs. Simon Whetstone farm, Section 9, pumped 12 bbls. This was formerly reported as drilling by Charles Mertz and others.

In Scott Township, Sandusky County, Stitt, Poole & James completed their No. 53 on their own farm, Section 4, for a 5-bbl. pumper. Top of sand was found at 1,253 feet and drilled 61 feet in to a total depth of 1,314 feet. This is one of the old producing leases near Rollersville and the well is the first drilled upon it for many years.

In Recovery Township, Mercer County, A. W. Neely and others' No. 3 on the A. Fecher heirs, Section 24, is a 15-bbl. pumper. In Granville Township, same County, V. G. Lowry and others' No. 6 Stephen Wendel, Section 19, is also a 15-bbl. pumper. In Jefferson Township, the June Oil Co.'s test on the M. L. Richardson farm, in the the southeast quarter of Section 4, showed a gas volume of around 65,000 feet.

In Eden Township, Seneca County, the Sun Oil Co.'s No. 4 S. A. Barhoff, Section 15, is a duster. Top of Trenton was found at 1,715 feet and drilled to 330 feet into a depth of 2,045 feet. Same company's No. 1 on the northeast corner of the E. W. Snyder, Section 15, was also a dry hole, the top of the sand being found at 1,716 feet and drilled 250 feet into a depth of 1,966 feet.

In Harris Township, Ottawa County, Gust Magsig & Sons' No. 3, on the J. D. Smith, Section 23, pumped 5 bbls. after shot at a depth of 1,288 feet.

Paulding County has another well to its credit and indicates that a new field is being opened up far to the north of the old lines of the Trenton Rock Field. This is the U. S. A. Oil Co.'s No. 1 on the J. H. Houser, in the northeast quarter of the northeast quarter of Section 4, Benton Township, and about 1 mile west of the town of Payne and 3 miles east of the Ohio-Indiana State line. The well is reported at 35 bbls. and is the fourth producer completed in the Payne district for this company. Representatives of the Ohio Oil Co. and other scouts were present at the well when it was drilled in and all are of the opinion that the western part of Paulding County is destined for quite an oil field, with possibilities of striking some larger wells. Leasemen are taking all available acreage, not alone around the present producing wells but 5 and more miles ahead. It is estimated that close to 25,000 acres have been leased up in Benton, Harris and Paulding Townships, and some acreage is being gobbled up on the Indiana side of the State line. This Paulding County new production is located almost directly east from production found some years ago in the territory just south of Fort Wayne. Leases were easy to secure around Payne until a few weeks ago and are reported to be bringing from $5 to $10 per acre for close-in territory. The Buckeye Pipe Line Co. has its gathering line from the wells to its loading rack almost completed and then the production to the four wells will be marketed. The fact that a gathering line is under way to handle the oil will encourage more active development work.

Indiana Field

There is the usual excitement in the Hotmire Pool, in Pike Township, Jay County. The wells are far above the average. Trenton Rock producer. The latest well of note was the Omar Oil & Gas Co., and Chaney's No. 9 on the J. E. Mock farm. This well flowed through the casing and the first 14 hours put 91 bbls in tankage through a single lead line 1,250 feet in length. The well is estimated at 250 bbls. when tubed and on the pump, and if anything like other wells in the pool would make a steady 40-bbl. producer, which is considered a valuable asset in the Trenton Fields.

John Slagle, of Slage & Johnson, Pittsburgh, Pa., purchased a one-half interest in the Orr well, in Section 24, Pike Township, with R. G. Kerlin, of Toledo, Ohio. It is a test for the northeast extension, a direction not yet tested. It will have a great bearing on the field. Farther northeast of the Orr, there are two small wells pumping in Section 8, Madison Township, on an exact 45 degree angle. Mack P. Colt, N. E. Masters and H. J. Bourne have the offset acreage to the Orr.

E. D. Howard of Buffalo, N. Y., a veteran Pennsylvania producer, is in the field, looking over prospects. His son has four wells in the field.

In the Hotmire Pool, Colt & Masters' No. 2 Oren O'Brien farm, is reported at 25 bbls. and their Nos. 18 and 19 Ritenour farm, are making good showings. Makeever Brothers, the well known Boston, Mass., operators, and N. E. Masters are drilling No. 5 Fannie Lyons farm. The Wabash Pipe Line Co., which handles the production in the Hotmire Pool are increasing their runs from day to day.

In southwestern Indiana, in the Princeton district, in Center Township, Gibson County Mann, Huber & Tichenour's No. 5 W. C. Reeves, Section 24, pumped 15 bbls. Top of sand was found at 1,412 feet and drilled but 5 feet in where the pay was encountered.

No late reports are in from the wildcat well at Bloomington, in Penn Township, Parke County, where a nice showing was reported some time ago.

Central Ohio Field

Nothing of any great importance transpired in the Central Ohio Field during the week, although showings of oil were found in numerous tests which are now being cleaned out and will be tested as producers from the Clinton lime. In East Union Township, Wayne County. Davis & Davis are cleaning out their test on the E. G. Kountz, Section 8, which has a showing of oil and some gas. In Cannan Township, same county, Stutzman & Fullerton's test on the Art Foucher 13 acres, Section 14, has a fairly good showing of oil and after it is cleaned out, may make a commercial producer from the same sand. In the same township, the Klise-Eckstein-McCann Co.'s test on the W. C. Oneacre 80 acres, Section 23, and No. 1, on the M. M. Lichty 24 acres, Section 24, both have oil showings and are being cleaned out. In Franklin Township, Wayne County, the Ohio Oil Co.'s test on the Edward Uhl farm, Section 5, looks very much like a commercial oil producer, also under the cleaning out process.

In Morrow Township, Holmes County, the Ohio Oil Co.'s test on the Ernest Cornell farm, Section 22, has all the earmarks of a commercial oil producer, and may be the opening of an entirely new producing region.

Late Completions

In Hanover Township, Ashland County, the Ohio Fuel Gas Co. brought in a nice gas well at a test on the R. Waddle 13 acres, Section 17. In Westfield Township, Medina County, Daugherty Brothers have a light gas well at a test on the Elden Stahl, Section 15. In York Township, the Logan Gas Co. drilled a light gas well at a test on the George L. Morelock, Section 7.

In Congress Township, Wayne County, the Logan Gas Co. encountered a duster in a test on the D. C. Harbaugh 160 acres in Section 10. In Chippewa Township, the East Ohio Gas Co. got only a light gas well at a test on the A. Arnold, Section 21. In Cannan Township, Arthur & Mills drilled a 2,000,000-foot gas well in their No. 1 A. W. Latimer, Section 15, and the Creston Gas Co. got a nice gas well in No. 3 on the D. Wiles 120 acres, Section 19. In Plain Township, the Klise-Eckstein-McCann Co. drilled a fair gas well in its No. 3 on the J. Troxel 134 acres, Section 17.

In Benton Township, Hocking County, the Ohio Fuel Gas Co. struck a dry hole at a test on the M. E. Barton, Section 22. In Moore Township, Holmes County, the East Ohio Gas Co.'s second test on the Thomas P. Connor, Section 12, proved a duster.

In Franklin Township, Jackson County, one of the important late wells in wildcat territory, the Ohio Fuel Supply Co. was sucessful in landing a very fair gas well in a test on the John Johnson, Section 27.

A few new locations have been made and some new wells started drilling over the vast area of the Central Ohio Field. In Union Township, Licking County, the Logan Gas Co. made a location for a test on the Leonard Rees 90 acres, Section 10. In Clay Township, Knox County, the same company is starting No. 4 on the B. F. Baird 220 acres, Section 18, and the Knox-Wood Oil Co. is drilling No. 1 on the J. C. Purdy 40 acres, Section 7, same township. In Brown Township, same county, the East Ohio Gas Co. is drilling No. 3 on the Ray Koppert 80 acres, Section 7.

In Layfayette Township, Medina County, the Ohio Fuel Gas Co. is drilling a test on the W. M. Reeder 45 acres, Section 10. In York Township, the East Ohio Gas Co. is drilling a test on the William H. Deitrick 93 acres, Section 14.

In Grafton Township, Lorain County, the East Ohio Gas Co. is drilling No. 3 E. F. Schaffer, Lot 67, and the Ohio Fuel Gas Co. is drilling a second test on the George Schaffer 30 acres, Lot 67.

In Benton Township, Hocking County, the Ohio Falls Oil & Gas Co. is drilling No. 4 on the Joseph Ernhart 15 acres, Section 13, and the Logan Gas Co. is drilling No. 3 A. L. Unger, Section 8.

In Monroe Township, Holmes County, the Cumberland Petroleum Co. is drilling a test on the W. A. Smith 17 acres, Section 10, and the Central Ohio Gas Co. is drilling a test on the Jesse Powers, Section 31. In Hardy Township, the East Ohio Gas Co. is drilling No. 2 W. H. Uhl 20 acres, Section 22, and No. 1 George Lemmon 80 acres, Section 27, Prairie Township, same county.

In Richfield Township Summit County, the Klise-Eckstein-McCann Co. is drilling a test on the Alfred Newton 174 acres, Section 1.

One of the best gas wells completed so far in the Shiloh district, of Cass Township, Richland County, was made by the Greenwich Gas & Oil Co., formerly reported as H. Noble and others, in the No. 4 well on the Doctor Noble farm, Section 1, which is credited with an open flow of 4,500,000 feet. This makes four producing gas wells on the Noble farm. No. 1 came in at 1,500,000 feet; No. 2 at 800,000 feet and No. 3 at 600,000 feet, showing that No. 4 had the banner well, and in the center of the heavy gas area. The gas in No. 4 well was encountered in the third pay sand, something unknown in that field heretofore and may mean there is a new gas sand of much importance discovered by the drilling of No. 4 well. This well was brought in under the personal supervision of James Moore, president of the Mansfield Industrial Pipe Line Co., of Mansfield, and the drilling is under the supervision of Faulkner & Phelps, Cleveland contractors. No. 5 well is being started on the Doctor Noble farm, and several new locations have been staked out. The Greenwich Co. holds other leases in the field which will be drilled at an early date. This company was recently organized by W. H. Noble, postmaster at Greenwich, Ohio, who is president. W. F. Deuber of Cleveland, vice president and A. B. Patton, of Cleveland, secretary and treasurer.

Illinois Field

Only one completions is reported from the Illinois Field for the week, which is R. E. Young and others' test on the northwest corner of the Rose Cunningham farm, Section 28, Montgomery Township, Crawford County, dry at a depth of 975 feet.

In Centralia Township Marion County, Floyd Alspach and others abandoned their well on the Charles Rowenkamp lot, in Section 19, it being exhausted of its oil.

Eastern Kentucky Field

Completions were few in the Eastern Kentucky fields. The North Weir Field

(Continued on Page 113)

DAYTON
Collar Leak Clamps

No. 9

Note construction of locking device on flanges . . . It is impossible for the flange joints to spread.

THE DAYTON PIPE COUPLING CO.
DAYTON, OHIO

Gulf Coast Oil Operations

By P. L. McGreal

Little variation in gross production. Increase in number of wildcat tests starting. Republic Production Co. and Houston Oil Co.'s No. 78 Dolbear, Hull Pool, starts flowing 2,500 bbls. Magnolia Petroleum Co.'s No. 3 Schubert, Guadalupe side, Luling district, flowing 650 bbls. Laredo district active.

HOUSTON, Texas, April 21.—It has been an uneventful week in the Gulf Coast region and the southwest fields, with but little variation in the gross production figures from last week's estimate. An increase is noted in the number of wildcat tests starting in the Gulf counties apart from the domes and in the sections to the west and southwest.

A total of 21 wells were completed in the Coastal pools during the week, the initial production aggregating 4,520 bbls. Two dry holes are listed, one gas blowout, and two salt water holes. Eight wells were bailing at the close of the week. Four wells were completed in the southwest fields with 735 bbls. new output, one dry hole and two salt water wells. One test is bailing. The Hull Pool registered five completions and contributed 3,085 bbls. of the total new production.

The United Packers Oil Co.'s No. 1 Ward ranch in Jim Hogg County bailed hot salt water at 1,538 feet. Screen was set in 30 feet of sand. The test is standing idle.

Estimated Gross Production

The estimated daily average gross production for the week is placed at 109,635 bbls., compared with an estimate of 110,607 bbls. last week. This includes the coastal pools and the southwestern fields, and the Luling Field, where the estimate for the week is placed at 19,250 bbls., with a potential of 26,000 bbls. Inadequate pipe line facilities there have caused a partial shut in of many of the flowing wells. The potential for the Calliham district in McMullen County is estimated at 1,800 bbls. The same conditions apply there as at Luling. The estimate for each district is as follows:

District—	Bbls.
Batson	1,300
Blue Ridge	750
Barber Hill	235
Dayton	95
Damon Mound	1,570
Edgerly (La.)	380
Goose Creek	12,925
Humble	4,810
Hull	22,875
Jennings (La.)	520
Markham	95
Orange	12,400
Pierce Junction	570
Spindletop	860
Saratoga	1,565
Sour Lake	4,660
Somerset and Piedras Pintas	2,440
Vinton (La.)	5,210
Welsh & Anse La Bute (La.)	80
West Columbia	12,500
Luling	19,250
*Miscellaneous	4,845
Total	109,635

*Includes Laredo districts, Milam County, Nacogdoches, Big Creek, Big Hill, Stratton Ridge, High Island, etc.

Operations in the Pools

The Gulf Production Co. is fishing in its deep test at 5,800 feet on Hager Fee on the east side of Cow Bayou in the Orange Pool. An effort was made to bail it at that depth. Its No. 7-A Kishi-Lang, which came in last week at 4,100 feet, rated at 3,500 bbls., 15 per cent water, is now making 800 bbls. and shows 50 per cent sediment and water. Its No. 1 Consolidated bailed salt water at 4,200 feet and is deepening at 4,310 feet. The Edgerly Petroleum Co. worked No. 4 Carbello over into a 75-bbl. pumper at 3,300 feet. The Sun Oil Co.s No. 4 Gunstream is a pumper at 3,525 feet, as is the Supreme Oil Co.'s No. 2 Jackson at 3,560 feet. Both are work overs. The Sun Oil Co.'s No. 1 Kato on the northeast side of the pool is standing idle at 4,650 feet after bailing salt water. Cameron and Anderson's No. 2 State Land is flowing 250 bbls. of fluid, 50 per cent oil at 3,325 feet. The Mutual Oil Co.'s No. 9 Chesson, on the north side, is bailing at 2,910 feet and the Orange Production Co.'s No. 1 Gum Island, 2½ miles east of the pool, is bailing at 2,925 feet.

In the southeast extension, the Sun Oil Co.'s No. 4 Brown is drilling below 4,575 feet and No. 5 Brown at 1,345 feet. The Brownie Babbittee Oil Co.'s No. 2 Brown is around 1,235 feet. The Gulf Co.'s No. 4 Pevito is deepening at 4,765 feet and No. 6 is around 3,415 feet. No. 15 Hager Fee is rigging. In other parts of the pool the same company is drilling No. 6 Hager-Moore at 3,414 feet and No. 7 O. Chesson at 3,600 feet with No. 3 Winifree Fee rigging. The Rycade Petroleum Co.'s No. 3-A State land is below 1,900 feet, No. 1-E State is at 4,565 feet, No. 2 is rigging and No. 4-E is assembling derrick material. These are on the banks of Cow Bayou, the derricks standing on piling. The company is drilling No. 2 Kishi to the north at 3,325 feet and No. 4 below 4,500 feet.

On the northeast side, the American National Oil Co.'s No. 1 Winifree is below 4,465 feet. In older sections of the pool, the Edgerly Petroleum Co.'s No. 3 Carbello is working over and No. 10 is drilling around 3,545 feet. The Gulf Coast Oil Co.'s No. 5 Leon is deepening at 1,235 feet. The Humble Oil & Refining Co. is working over No. 18-B Chesson and drilling No. 20 Chesson at 2,923 feet. The Mutual Oil Co.'s No. 1 Chesson is deepening at 4,100 feet and No. 11 is fishing. The Kishi Development Co.'s No. 5-E Kishi is deepening at 1,435 feet and No. 2 Smith-Foreman at 3,700 feet. The Orange Petroleum Co.'s No. 3 Chesson is fishing. A location has been made for No. 7. Its No. 4 Winifree is drilling around 2,775 feet. H. T. McLain's No. 1 Williams on the northwest is drilling around 4,000 feet and the Pilot Oil Co.'s No. 1 Aronson, west of production, is below 4,590 feet.

Hardin County Pools

In the Sour Lake Pool The Texas Co.'s No. 235 Fee is flowing 175 bbls. at 1,880 feet. It was worked over. The Lake View Oil Co.'s No. 4 Minor is making 150 bbls. by heads, 20 per cent oil at 1,886 feet. The Humble Oil & Refining Co. is bailing No. 37 Hardin at 2,725 feet, as is the Minor Oil Co.'s No. 70 Fee at 1,785 feet. The Gulf Production Co.'s No. 52 Hardin is drilling and No. 56 Hardin is sidetracking.

In the Saratoga Pool, the Rio Bravo Oil Co.'s No. 83-B bailed dry at 2,500 feet. Its No. 2-P to the north is drilling at 1,623 feet. The Gulf Production Co.'s No. 1 Teel is at 1,980 feet. Paggi Brothers No. 42 Queen is below 410 feet. The Regna Oil Co.'s No. 15 Cotton is around 450 feet and the Weldon Oil Co.'s No. 5 is at 600 feet. The San Bernard Oil Co.'s No. 17 Hooks is shut down. The Skinner Oil Co. has a location for No. 10 Kirby.

In the Batson Pool, the Gulf Production Co.'s No. 156 Wing is at 600 feet and No. 157 Wing is below 1,400 feet. S. R. Buchanan's No. 74 Milhome is drilling around 1,545 feet. The Ada Bell Oil Co.'s No. 80 Paraffine is at 869 feet. The Deutser Oil Co.'s No. 6 Trustee is drilling at 565 feet with No. 1 Hooks at 1,780 feet. The East Batson Oil Co.'s No. 5 Allen is around 770 feet. The Paraffine Oil Co.'s No. 56 Fee is bailing at 710 feet.

Liberty County

In the Hull Pool, the Republic Production Co. finished the best well of the week in any of the pools. It is No. 78 on the Dolbear 800 acres, on the east side, operated jointly by the Republic and the Houston Oil Co. of Texas. Screen was set at 2,520 feet and the well started flowing 2,500 bbls. pipe line oil. Same interests No. 80 Dolbear is pumping 200 bbls. at 2,500 feet. F. L. Thompson's No. 3 Ray on the northwest side, is pumping 175 bbls. at 2,050 feet. The Gulf Production Co.'s No. 18 Phoenix is making 150 bbls. on the pump at 2,590 feet and No. 39 Phoenix is pumping 60 bbls. at 3,200 feet. The Red Cantor Oil Co.'s No. 1 Cantor on the dome is testing a showing in a sand at 460 feet. Several sulphur shows have been found in this test.

The Humble Oil and Refining Co. has made a location for No. L Hannah 30 acres on the northwest side of the dome, 1,000 feet from production. The same company is drilling No. 2 Sterling at 3,222 feet and No. 1 Crosbie at 1,100 feet. No. 2 Merchant is drilling below 4,100 feet. The Monarch Oil & Refining Co.'s No. 4 Miller is below 2,400 feet. The Link Oil Co.'s No. 3 Pevito is fishing. The Houston Production Co.'s No. 1 Taylor is at 2,285 feet. The Gulf Production Co.'s No. 6-A Harrison Fee is below 2,323 feet. Its No. 12 Hannah Fee is around 4,750 feet and No. 13 Hannah Fee is at 2,245 feet with No. 14 below 3,220 feet. The Mecom Oil Co.'s No. 2 Mecom is working over. The Yount Lee Oil Co.'s No. 9 Merchant is below 3,260 feet.

On the northeast side, the Humble Oil & Refining Co.'s No. 10 Hankmer is below 1,000 feet. The Gulf Production Co.'s No. 19 Morris-Phillips is at 3,045 feet, deepening. On the east side of the dome, the Republic and Houston Oil Co.'s joint 53 and 69 Dolbear are working over. No. 81 is drilling at 1,635 feet. On the southeast side, the Gulf Production Co.'s No. 38 Phoenix is drilling at 3,090 feet. No. 40 is below 1,765 feet. No. 41 is rigging with a derrick up for No. 42. No. 7 Thomas Fee is at 2,975 feet. On the south side, the Sun Oil Co.'s No. 9 Garr is deepening at 1,770 feet and on the southwest side, the Texas and Vacuum Oil Co.'s joint No. 2 Hannah is drilling below 2,775 feet.

One well is drilling in the north Dayton Pool by the Old Colony Oil Co. The Gulf Co. and D. J. Harrison jointly are testing a dome south of Devers.

Harris County Pools

The Gulf Production Co.'s No. 19 Smith on the east side of the Goose Creek Pool, blew out during the week while a crew were working over at 3,550 feet. The gas ignited and destroyed the derrick. Same company's No. 27 Beaumont in the bay blew out, but is now drilling ahead at 3,650 feet. The Gulf Co. worked No. 5 Rucker over into a pumper at 3,510 feet. The Rucker is a 2½-acre lease on which the company has been operating for eight years and it shows a profit of $1,400,000 to January 1 last. The Gulf Co.'s No. 20-A Wright is drilling below 3,600 feet.

Same company's No. 5 Wright is below 2,545 feet. No. 16 H. Busch is below 2,800 feet. No. 7 Chapman-Bryan is drilling at 3,090 feet. No. 5 State land in the bay is around 3,760 feet.

The Humble Oil & Refining Co.'s No. 54 Smith is drilling at 2,650 feet. A derrick is up for No. 56 and No. 57 is drilling at 980 feet. No. 13 Schilling is working over at 1,350 feet and No. 23 is drilling at 2,670 feet. No. 26 Sweet is at 2,400 feet and No. 3 Harrell below 3,370 feet. The Sun Oil Co.'s No. 12 Bartlett-Smith is sidetracking at 1,000 feet. The Gulf Coast Oil Co.'s No. 20 Galliard is drilling at 1,456 feet. The J. R. Copeland Oil Co. has a derrick up for No. 5 Bryan and is drilling No. 2 on Spillman Island at 2,543 feet. The La Porte Oil & Refining Co. is rigging No. 2 Freeman in the bay. Bassett Blakely is rigging No. 7 Schilling. Northwest of production, the Hisgen Petroleum Co.'s No. 2 Bush is at 1,450 feet.

In the Humble Pool, J. Martin's No. 28 Jones is drilling and the Mars Oil Co. has rigged No. 1 Jones. The Galena-Signal Oil Co. of Texas is working over old wells on the Stevenson. The Texas Co. is drilling one well on the Koehler and one on the Carroll Oil and Gas Co. leases.

At Pierce Junction, the Gulf Production Co.'s No. 15 Taylor is milling at 3,700 feet with a location made for No. 16. The Atlantic Oil Producing Co.'s No. 1 Ross is drilling below 695 feet.

Brazoria County Pools

At West Columbia, The Texas Co.'s No. 13 Hogg, a work over, is bailing at 3,275 feet. The Gulf Production Co.'s No. 4 H. Masterson is working over at 2,600 feet. The Humble Oil & Refining Co.'s No. 2 Smith on the northwest side is fishing for pipe stuck in the hole at 3,300 feet. Its No. 2 Nadge is drilling around 2,650 feet. No. 23 Japhet on the east side of the pool, is drilling below 2,970 feet.

At Damon Mound, the Sinclair Oil & Gas Co.'s No. 1 Masteron is a 10-bbl. well at 1,855 feet. No. 20 Masterson is bailing and No. 4 Mock is drilling.

Fort Bend County Pools

In the Blue Rudge Pool, The Texas Co.'s No. 11 Robinson on the northwest side, is drilling below 4,235 feet. The Gulf Production Co. is starting Nos. 5-B and 6-B Blakely on the east side and No. 3 West-Schenk on the south side.

At Big Creek, Rich and others' No. 1 Ahlers are below 2,800 feet. The Gulf Production Co. and Snowden and McSweeny jointly are drilling Nos. 12 and 13 Davis and No. 6 Wheat.

Other Pools

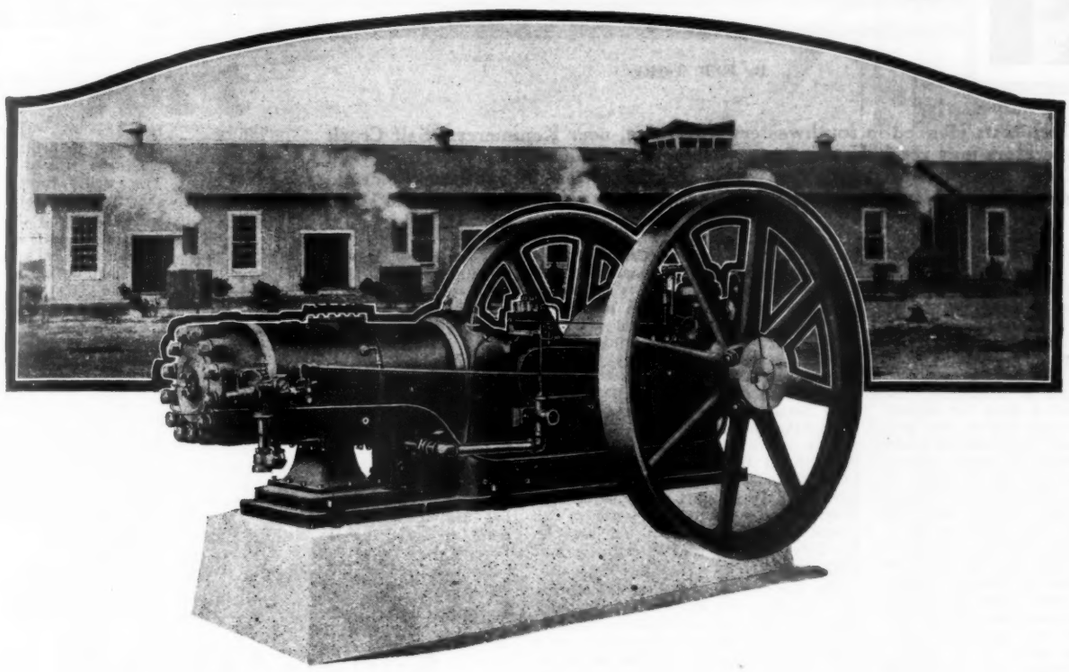
Off the dome at Spindletop, the Rycade Petroleum Co.'s No. 2 McFadden is drilling below 3,385 feet. In the old district, the Sun Oil Co.'s No. 48 Lone Star is pumping 35 bbls. at 750 feet. The Seiben Oil Co. has a 10-bbl. well in No. 1 Herbert at 900 feet.

The Gulf Production Co.'s No. 203 Gladys is sidetracking. Sheffield and others' No. 1 Unity is drilling at 915 feet. A location has been made for No. 3 B. Veatch. The Stella Oil Co.'s No. 1 French is drilling around 745 feet. The Unity Oil Co. is starting No. 83 McFadden. The Baker Oil Co.'s No. 10 Trembley is drilling at 890 feet. Wilson and Broach's No. 45 Higgins is at 800 feet.

In the Markham Pool, the Rycade Petroleum Co.'s No. 2 Hudson and No. 1 Gray, both below the ordinary depths. The Schulte Oil Co.'s No. 1 Hawk is shut down.

Mills Bennett's No. 1 Barrow on the southwest side of the dome at Barbers Hill is fishing for casing dropped in the hole and may be abandoned. If flowed

(Continued on Page 66)



"There's less work on my job if I have Bessemers"

testifies the engineer of a booster station in Oklahoma, *"we can go out into the woods and read meters—our Bessemers will run without watching."*

Says another Bessemer owner, this time in Louisiana—*"many of our Bessemer Engines aren't seen more than once in 24 hours but they keep going just the same."*

"They keep going"—"there's less work"—what more do you ask of an oil field engine?

"You buy the best when you buy Bessemers."

THE BESSEMER GAS ENGINE COMPANY
52 York Street Grove City, Pa.

BESSEMER

BESSEMER OIL FIELD ENGINES – COMPRESSORS VACUUM PUMPS – ROLLER PUMPING POWERS

Wyoming Field Operations

By F. B. Taylor

Deep tests planned in southwestern Wyoming, near Kemmerer. Salt Creek operators may rescind order for producing from one sand only. Third Wall Creek development showing up well. Leidecker test in Southern Colorado going deeper. Rotary operations in Fort Collins. Wellington Dome to start.

CASPER, Wyo., April 19.—Bad weather continued and snow is now making trouble for the trucks again in Wyoming and Montana. This is one of the latest springs ever experienced, according to the old timers.

The southwest part of Wyoming is in the limelight. In the Labarge and Big Piney district, north of Kemmerer, the Midwest is to start a deep test to explore the lower sands and to try and find the mother pools that feeds the shale wells already drilled at these points. Southwest of Kemmerer the Producers & Refiners will drill a deep hole in the Clay Basin structure which lies on the Utah and Wyoming line, and south of Rock Springs, the Midwest, Mutual, and other firms will drill a joint well to see what lies in the lower tertiary horizons. There is an outcrop of Tertiary sand that shows oil on the surface some miles from this last location, and the geologists consider this may be taken as an indication that the Tertiary may be found oil bearing. This structure has been recognized as a Tertiary structure for some years past, but the depth has deterred the oil companies from testing it.

May Rescind Salt Creek Rule

The Salt Creek operators are considering rescinding the order of producing from one sand only in each well in that field. The Conservation Committee decided upon this order and it has been in force for about a year, but the recent drop in production has changed the conditions at Salt Creek so it is considered no longer necessary and one well can handle production at present from both the first and second Wall Creek sands.

The Western States Oil & Land Co. has completed the drilling of the deep test on Section 5-35-65, in the Lance Creek Field, Niobrara County, to a depth of 3,209 feet and is on top of the Dakota sand. The casing is being cemented and will be allowed to set for about a week before drilling in. The Lance Creek Field still looks good in spite of the many dry holes. The Ohio's big well is making around 2,500 bbls. daily and even the old discovery well on Section 36-36-65 is still producing about 40 bbls. daily. The Western States is very nicely located with its leases in a part of the field that now appears to be good, though for a time it was condemned.

A deep test outside the present area of the Salt Creek Field on the south part, is being planned by several independent operators. This test is to be drilled near the old Midland well and is to go to the Dakota and Lakota sands.

The work on the gas line from the Eight Mile Lake Dome in Carbon County, south of Rawlins, is progressing satisfactorily in spite of bad weather conditions. Two ditches are digging trench and the pipe is being strung on the right of way.

The well of the Hatfield Oil Co. that discovered gas there is shut in except for what is used to drill the No. 2 well of the same company. The No. 22 well is about 1,000 feet deep at present and making hole daily, several shows of gas were struck in the shale at different points but the main body of gas is expected about 2,500 feet or deeper.

The third Wall Creek development in the south end of the Salt Creek Field is showing up well. The Kasoming well of the Prairie Oil & Gas Co. is producing about 200 bbls. daily on the pump and the Ohio Oil Co., on Section 17-39 78, is cleaning out after setting casing through the second Wall Creek sand to a depth of 2,834 feet. The swab was used for 12 hours and the wells showed for a 250-bbl. producer but the swab was lost in the hole and is still there. This well is only 3 feet in the sand. No. 13 Bywater, of the Kasoming on Section 20-39-78, found the upper layer of the third Wall Creek sand dry and the hole is drilling on down to make a test of the second layer. If this should also be found dry the well may be drilled to the Lakota sand.

The Sheldon Dome well of the Marine Oil Co., which was drilled about 50 miles north of Riverton, in Fremont County, is a duster and the casing has been pulled and the hole plugged. On Section 20-39-78 in the Salt Creek Field, the Marine is setting the 10-inch pipe at 2,100 feet in the No. 5 now drilling there and should have the well completed in a week or two. No. 6 on the same section is a rig and is ready for the tools. The Marine's well on Section 9-39-78 is in the second Wall Creek sand at 2,865 feet and is a good well, though not yet tested.

Lightning struck one of the large 55,000 bbls. tanks at the Salt Creek pump station of the Midwest Refining Co. and set it on fire the past week. The damage was rather small, however, as the tank was nearly empty and the fire soon under control.

Montana Operations

Montana reports an interesting wildcat in the northern part of the State. Near Stockett, Cascade County, about 18 miles south of Great Falls, the Tiger Butte Oil Co., a Minnesota firm, found the Ellis sand at about 640 feet and a showing of oil reported of commercial size. The location is on Section 3-17-4.

The Flynn Brothers' well on the Ragged Point structure, in Musselshell County, Montana, is also reported showing gas and oil after being shut down all winter. The drillers recently went to the location and started work at the well. The gas commenced to show as soon as the tools were moved and later some oil showed. The Ohio Oil Co. drilled a dry hole on this structure and it was generally considered worthless after the Ohio abandoned, although on the surface, it is a good looking structure.

Because of the demand expected the coming season for black oil, on account of the new plant at the Casper refinery of the Standard of Indiana for making asphalt, the Soap Creek Field which has been shut down for three years, is expected to be opened and the wells started producing.

In the Cat Creek Field, in Fergus County, the California Co. started spudding on No. 6 well, on Section 12-15-28, in the west end development of the field. No. 5 well of the same company came in last week as a dry hole.

The Mutual Oil Co. is spudding in an offset to the Musselshell well, on Section 8-15-29 in the central part of the field, and the same company is producing from the old Musselshell well that has been standing idle for some time past.

Colorado Wildcatting

In Colorado the weather is holding up spring work, as in Wyoming, but 14 wildcats are active with several others preparing to start drilling. In the Fort Collins district, the Union of California will drill the bulk of the holes there with rotary drills and has contracted for several steel rotary type derricks, some of which are set up.

The Union and other companies have very deep drilling to be done to reach the sand. The Union of California has five drilling wells and locations about ready to start in the Wellington and Fort Collins Domes and the Union of Colorado has one well active on the Wellington Dome.

The Transcontinental Oil Co. interested with The Texas Co. in the Moffatt Field in Colorado, is considering the building of a refinery at some point near the field instead of laying a pipe line from the field to Parco to connect with the Producers & Refiners pipe line in central Wyoming. The Transcontinental owns a half interest in 1,150 acres on the Hamilton Dome, where the discovery well is located and this is all considered good territory. The firm also has holdings on other structures nearby.

The Leidecker well in southern Colorado that was reported as a new discovery well is drilling deeper again after making a test of the shale oil showing. The well expects that Dakota sand shortly and production at that formation.

In the Fort Collins district, the Union is about ready to start on the rotary well at Douglass Lake near Fort Collins. The well drilling on the Fort Collins Dome is about 3,000 feet deep and the well on the Wellington Dome is around 1,000 feet.

Runs for the Week

Salt Creek	99,500
Teapot	3,900
Big Muddy	3,435
Grass Creek	3,450
Elk Basin	1,361
Greybull	100
Mule Creek	800
Rock River	3,215
Lance Creek	2,025
Poison Spider	210
Osage	625
Hamilton Dome	735
Lander	630
Pilot Butte	65
Lost Soldier	4,625
Ferris	150
Cat Creek	4,675
Sunburst	4,800
Miscellaneous	550
Total	135,675

Kansas Oil Field News

By C. D. Lockwood

Although the Cowley County well which created something of a sensation early last week turned out to be smaller than at first estimated, it is about twice as good as the discovery well which it offsets, and produced more than 700 bbls. daily for several days during the past week. The latest available gauge was 690 bbls. from 28 feet in the sand topped at 3,289 feet. The producer referred to is the Waite Phillips Co., Independent Oil & Gas Co. and Marland Refining Co.'s No. 1 Glasgow, NE cor. SW, Section 20-33-3. Four new tests have been started by these companies in the vicinity. Rigs are building for No. 2 Wertman, SE cor. NW, Section 20-33-3, a north offset to the new well, and for No. 3 Wertman, SW cor. SE NW, same section. Rigs are also under construction for No. 2 Glasgow, SE cor. NE SW, and for No. 3 Glasgow, NW cor. NE SW, same section. The owners of the two excellent producers are confident that they will uncover a pool of large proportions in this area.

In the Eastman district of Cowley County, the Titus Oil Co. had a 12-bbl. showing of oil in its No. 1 Spahr, SW cor. NE SW, Section 5-31-6, from sand at 2,861-97 feet. Above that sand there was 8,000,000 feet of gas from 2,845-61 feet. Top of the sand was at 2,837 feet. To the west, the White Eagle Oil & Refining Co.'s No. 5 Newton, SW cor. NE NE, Section 15-30-4, was good for 85 bbls. after a shot of 50 quarts in sand at 2,785-2,806 feet. In the southern part of the county, T. B. Slick's No. 6 Olson, C NW NE SE, Section 1-35-7, which was drilled to 3,205 feet and shut down for some time, was plugged back to 2,360 feet where it was pumping 5 bbls. of oil and the same amount of water. The Tidal-Osage Oil Co. was spudding its No. 1 Smith, SE cor. NW NE, Section 1-35-7. Johnson and others were drilling at 350 feet in their No. 1 Wahlenmaier, C NW NE, Section 14-34-4.

The Sumner County showing which looked promising early last week proved disappointing. It was the Alcorn Oil Co.'s No. 1 Young, SE cor. NE, Section 33-32-2. The oil was all bailed out of the hole, however, and the well was drilling deeper at 3,381 feet. Sand was topped at 3,356 feet.

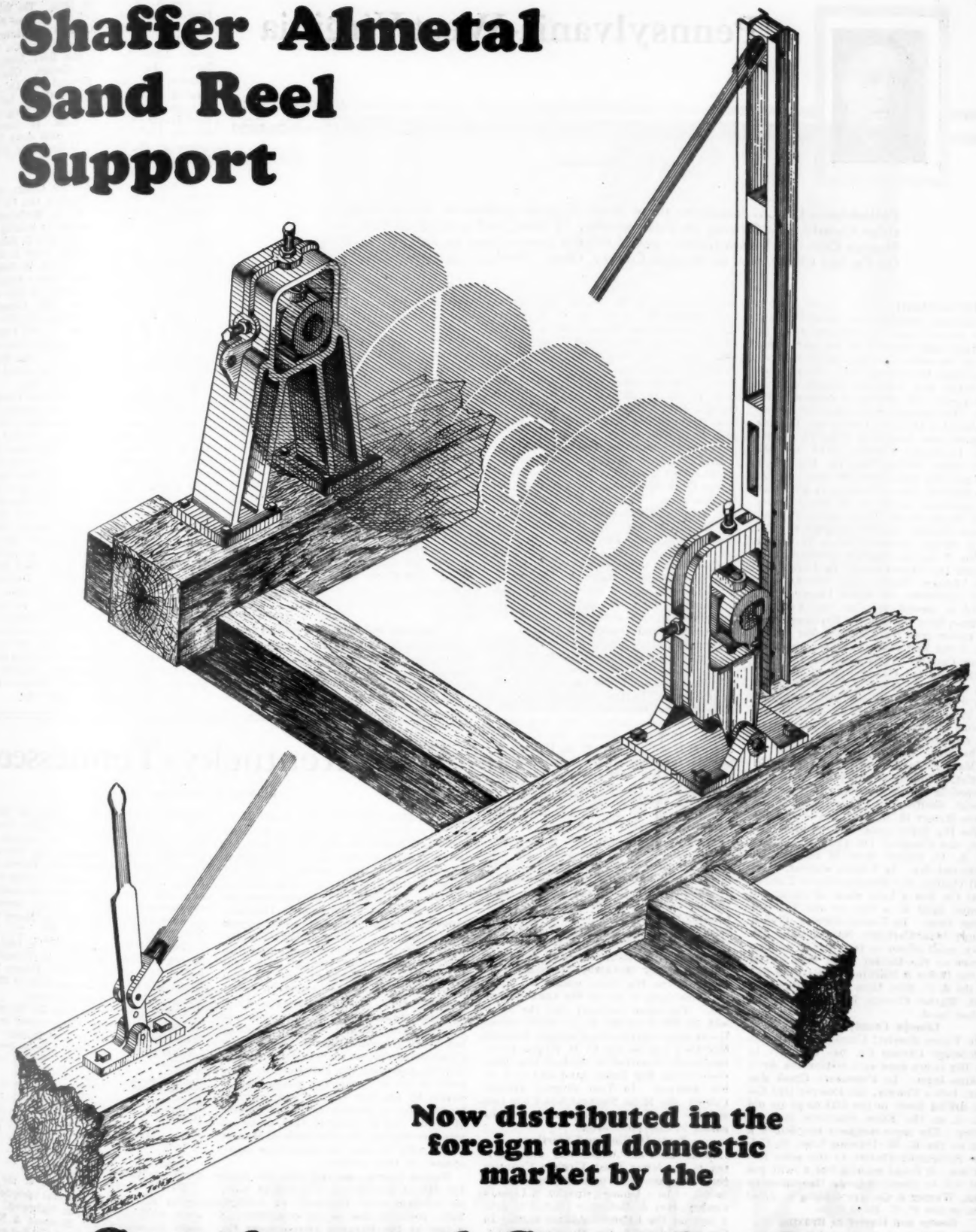
In Butler County, Rich and others had a 10-bbl. showing at 2,420-35 feet in their No. 2 Beaver, SW cor. SE SW, Section 23-28-7. Total depth was 2,470 feet and the hole was being cleaned out. Ellis and others abandoned their No. 1 Perry, NW cor. NE NE, Section 2-27-6, as dry at 2,791 feet after passing through broken sand at 2,663-2,710 feet. Hartman & Skaer made a location for their No. 1 Nibel, SE cor. Section 22-29-3. The Great Southern Oil Co. had timbers on the ground for No. 32 Dickson, SW cor. NE SW, Section 16-26-8.

Kansas operations were going ahead briskly. The Roxana Oil Corp. was spudding its No. 1 Thiesson, NW cor. SW, Section 26-21-5w, in McPherson County, in line with a number of tests in the neighborhood of the recent scene of wildcat activity. Childs, Hipple and others were fighting quicksand, while spudding their No. 1 Sallee, NW cor. SE, Section 3 22-6w, in Reno County. In Russell County, the Alcorn Oil Co. was moving in a rig for No. 1 Lucinda Silken, SE cor. Section 36-15-13w.

The older producing sections of the State were showing a renewal of activity that promises to develop new production. Ramsey and others had a rig up for No. 2 Plumer, SW cor. SE NE, Section 5-29-5, southern Butler County. In the Thrall Pool of Greenwood County, several wells were drilling at shallow depths. The Mission Oil Co. had a rig up for No. 2 Thrall, NW cor. SW, Section 32-23-10, and was spudding its No. 37 Thrall, CNL NE, same section. The Phillips Petroleum Co. had rigs up for Nos. 10, 11, and 12 Lewis and had a rig on the ground for No. 13 Lewis in the south half of NW, Section 32-23-10. In the northeast quarter of the southwest quarter, same section, the Great Southern Oil Co. had a rig up for No. 1 Thrall.

(Continued on Page 128)

Shaffer Almetal Sand Reel Support



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Pennsylvania-West Virginia

By D. S. Wakenight

Philadelphia Oil Co. completes three West Virginia producers, two in Doddridge County, one flowing 80 bbls., another 50 bbls., and a third 40 bbls. in Marion County. Logan County gets 5,000,000 gasser, best on record. Daily Oil Co. has 40-bbl. well in Morgan County, Ohio. Producer in Perry County.

PITTSBURGH, Pa., April 21.—Development work in the West Virginia fields proved more satisfactory than at any time since the first of the year. Some few of the wells completed came in much better than the average size. There were not many and with the exception of a good gasser, all located in defined territory. The largest well completed is the Philadelphia Oil Co.'s test on the Thomas J. Smith farm, located in West Union district, Doddridge County. The first 24 hours after drilling into the Big Injun sand pay, the well flowed 80 bbls. In the same district, the same company got a 50-bbl. producer on the S. O. Smith farm.

On States Fork, Mannington district, Marion County, the Philadelphia Oil Co. got a 40-bbl. producer when it drilled its No. 3 on the Martha Rowand farm through the 30-foot sand. In Logan district, Logan County, in the extreme lower southwest, the South Penn Oil Co. drilled a second test on the Yawkey-Freeman farm through the Berea grit. It is a gasser good for 5,000,000 feet a day. This is the best gasser ever completed in Logan County. It is reported that the South Penn Oil Co. may lay a line and pipe the gas to Huntington, W. Va. In Clay district, Wirt County, W. C. Patterson has drilled No. 1 on the M. A Donoho farm through the Big Injun sand and good for 5 bbls. a day.

The Hope Natural Gas Co.'s test on the Mary E. Johnson farm in Washington district, Calhoun County, is a 3-bbl. pumper in the salt sand. In Sheridan district, Godfrey L. Cabot's No. 4 well on the Robert H. Rogers farm is a gasser in the Big Injun sand. In the same district, the Chemical Oil Co.'s No. 12 on the A. C. Fisher farm is through all sands and dry. In Liberty district, Marshall County, the Manufacturer's Light & Heat Co. has a light show of oil in the Gordon sand at a test on the Lucinda Burge farm. In Center district, Wetzel County, the Carnegie Natural Gas Co. has a small gasser in the Gordon sand at a test on the Robert Rush farm. The Owens Bottle & Machine Co.'s second test on the J. C. Rice farm in Paw-Paw district, Marion County, is a gasser in the 30-foot sand.

Lincoln County Gasser

In Union district, Lincoln County, the Cambridge Carbon Co. has a gasser in the Big Injun sand at a test on the Arvil Adkins farm. In Freeman's Creek district, Lewis County, the Reserve Gas Co. has drilled down to the fifth sand its old No. 1 on the Edna Simmons farm, a gasser. The same company has drilled a test on the R. W. Duncan farm, in Collins Settlement district to the same formation. It found nothing but a little gas and will be abandoned. In the same district, Warner & Co. are drilling at 2,600 feet on the P. E. Bond farm.

Gasser and Duster in Braxton

The Pittsburgh & West Virginia Gas Co.'s test on the P. L. Moyer farm in Birch district, Braxton County, is a gasser in the Gordon sand. In Otter district, the Hazel-Atlas Gas Co.'s test on the Thomas Cutlip farm is dry in all sands and abandoned. In Grant district, Pleasants County, E. A. Ryan's No. 7 on the T. C. Hammett farm, is a very light pumper in the second salt sand. In the same district, J. M. Smith and others have drilled No. 4 on the J. B. Locke farm, through the Berea grit, a duster. In Walker district, Wood County, the Penn Royal Oil Co.'s No. 5, on the Charles King farm, is a very light pumper in the same formation. In Williams district, in the Big Run Field, the Hoglan Oil Co. drilled a test on the John Green farm through the first Cow Run sand, good for 5 bbls. a day.

Fair Producer in Lewis County

In Courthouse district, Lewis County, the Shea Oil & Gas Co. has drilled No. 3 on the G. O. Rohrbaugh farm through the Gordon sand. The hole filled up 2,000 feet with fluid and estimated to be good for 20 bbls. a day. In Walker district, Wood County, the Penn Royal Oil Co.'s No. 3 on the Smith-Foley farm, is a light pumper in the Berea grit. On Elk River, Big Sandy district, Kanawha County, J. A. Osborne completed No. 4 on the Sarah C. Koontz farm, a gasser good for 1,000,000 feet in the Big Injun sand.

Gassers and Dusters in Ritchie

Ritchie County headed the list in completions during the past week. In Murphy district, Haddox & Co. have a duster in the Big Injun sand at a test on the L. S. Smith farm. In the same district, the Hope Natural Gas Co.'s test on the Robert W. Stewart farm is dry and abandoned. In Union district, the Carnegie Natural Gas Co.'s test on the Della Summerville farm has a light show of oil and gas in the Big Injun sand. The same company's No. 6 on the A. M. Edgell farm is a gasser in the Big Injun sand. The Imperial Oil & Gas Products Co.'s test on the Martha Mullen farm in Clay district, is dry in the Big Injun sand. In the same locality, the Adams Oil Co. started to drill on the Amanda C. Adams farm. In Indian Creek, Murphy district, J. F. Deem & Co. have a very light pumper on the William Deem farm. On Lambs' Run, A. W. Smith & Co. have a small pumper in the Maxon sand at a test on the H. F. Anderson farm. In Union district, the South Penn Oil Co.'s No. 1 on the W. H. Hall farm, is a gasser in the Big Injun sand. No. 3 on the same farm is dry in the same formation. The same company had the same luck at No. 2 on the H. A. Miller farm. In the same district, the Carnegie Natural Gas Co.'s test on the D. B. Rymer farm, previously reported a duster, has been shot in the Big Injun sand and is a 3-bbl. pumper. In Troy district, Gilmer County, the Hope Natural Gas Co.'s test on the W. W. Rymer farm, is a light gasser in the Gantz sand.

Tests Drilling and Starting

More tests are under way and starting in the lower West Virginia Counties than in any other part of the Eastern fields. In Union district, Lincoln County, Roy & McComas started to drill a test on the Kenneth Adkins farm. In the same district, the Superior Gas Co. is building a rig on the Edna Stowers farm. C. C. Wolf started to drill at his first test and has the rig completed for a second test on the W. W. Ray farm. In Carroll district, C. C. Wolf started to drill on the A. M. Spurlock farm. In New Milton district, Doddridge County, the Carnegie Natural Gas Co. skidded the rig on the Richard Kelley farm. In Greenbrier district, Travis & Trainer are drilling at 700 feet on the B. F. Gatehouse farm. In Ravenwood district, Jackson County, the Henderson Oil Co. is still fishing at its important test on the H. V. McCoy farm.

Roane County Has New Work

In Geary district, Roane County, the United Fuel Gas Co. started to drill on the W. G. Carper farm. In the same district, the Carter Oil Co. is rigging up on the Simmons heirs' farm. In Walton district, the United Fuel Gas Co. is building a rig on the D. D. Kelley farm. The same company has made locations on the W. M. Sergent and L. M. Kelley farms. In Smithfield district, G. L. Cabot has rigged up on the S. L. Alderman farm. In Union district, Marshall County, George P. Wasmuth & Co. are rigging up at a second test on the John Otte Sons' farm. The Victor Oil Co. is due in the fifth sand at a test on the Isaac Coogle farm in Paw-Paw district, Marion County.

Braxton and Gilmer Counties

In Birch district, Braxton County, the Pittsburgh & West Virginia Gas Co. has pulled the 8¼-inch casing on the Ellison farm and will skid the rig. The same company is drilling at 1,800 feet on the A. K. Rogers farm. The Silver Basin Oil Co. started to drill on the W. A. Ramsey farm. In Otter district, the West Virginia Central Gas Co. is down 2,000 feet on the Burk Becker farm. In DeKalb district, Gilmer County, the Hope Natural Gas Co. is rigging up on the C. F. Gainer farm. The same company is building a rig on the Riddle-Westfall farm. In Center district the Philadelphia shut down for orders on the Orestes Whitsell and Alva Radabaugh farms.

Ritchie County

In Clay district, Ritchie County, the Pittsburgh & West Virginia Gas Co. is rigging up on the M. R. McCullough farm. The same company is building a road to a location on the Okel E. Milton farm. In Union district, Hood & McQuain have a rig up on the A. W. Zinkhorse farm. In the same district, Britton & Heckert started to drill on the O. L. Bush farm. The Carnegie Natural Gas Co. started to drill No. 1 on the S. M. Tharp farm. G. W. Franklin & Co. have rig material at a location on the W. H. Jones farm. The Hope Construction & Refining Co. started to drill on the C. W. Rexroad farm.

In Sheridan district, Calhoun County, the Richter Oil Co. has rig material at a location on the Mathilda Smith farm. The same company made a location on the Z. O. Copper farm. In the same district, the Southern Oil Co. is moving tools to a location on the S. M. Maze farm. The Richter Oil Co. has a rig up on the J. L. Elliott farm. Bickel & Son have the rig completed for a test on the Mary B. Smith farm, in Clay district, Wood County. In Collins Settlement district, Lewis County, Warner & Co. are drilling at 2,600 feet on the P. E. Bond farm. In New Milton district, Doddridge County, Trainer & Travis are rigging up on the J. F. Douglas farm. In Grant district, Harrison County, the Hope Construction & Refining Co. is building a rig on the E. H. Stout farm. In Washington district, Calhoun County, the Hope Natural Gas Co. has made locations on the Bee Hopkins, John F. Shaw and J.

(Continued on Page 100)

West Kentucky-Tennessee

By Vern T. Whitney

BOWLING GREEN, Ky., April 21.—Western Kentucky production for the month of March showed the largest increase in over a year and a half, and it is expected further increases will be shown during the coming warm weather months. The gain was general throughout the field, only one county, Hopkins, showing a slight decrease. The largest gain was in the Cumberland-Monroe district, with a production of 20,669.25 bbls., an increase of 9,881.86 bbls. over February. Of this total, the Paragon Development Co. ran 18,269.25 bbls., from 49 wells, a daily average of 12.03 bbls. per well. Many of these wells are over 2 years old, and very little drilling has taken place during the past winter. Pipe line facilities are excellent in this district, and that the Paragon has great faith in the oil producing possibilities is shown by the fact that it has arranged to care for a greatly increased volume of crude. It is reported that many oil men are visiting the Cumberland-Monroe fields, with the idea of doing some development in that section.

Barren County showed pipe line runs for March amounting to 7,306.23 bbls., an increase over February of 2,029.65 bbls., partially due to the completion of a line by the Paragon Development Co. to the new district southwest of Glasgow.

A remarkable increase was shown in the Owensboro section, comprising Hancock and Ohio Counties, total for March being 8,459 bbls., an increase of 2,173.59 bbls. over February. This production came from less than 50 pumping wells, and shows a fine average per well.

Warren County showed an increase of 2,511.28 bbls. with a total of 52,776 bbls., for March, while Allen County ran 33,809 bbls. or an increase of 2,889.46 bbls. compared with February totals. Production in both Warren and Allen Counties is holding a steady average, and the increase for the month is represented largely by the increased number of pumping days in March over February.

Simpson County showed a total for March of 2,401.45 bbls., an increase of 945 bbls., while Hopkins County produced 974.93 bbls., a decrease of 330.07 when compared with February.

A summary of the runs for the month of March showing the increase or decrease in each county is as follows:

County—	Runs	Increase	Decrease
Warren	52,776.00	2,511.28	
Allen	33,809.00	2,889.56	
Cumb-Monroe	20,669.25	9,881.86	
Hancock-Ohio	8,459.00	2,173.59	
Barren	7,306.23	2,029.65	
Simpson	2,401.45	945.77	
Hopkins	974.93		330.07
Total March	126,394.86	20,431.71	330.07
Total Feb.	106,293.22		
Difference	20,111.64		

Barren County Active

Barren County had one of the best weeks in its history, several exceptionally good completions being registered. The most important was Sampson & Norris Brothers' No. 4 Ritchie, 1,500 feet east of the nearest well on the Mansfield lease, in the new pool, southwest of Glasgow. When the sand was tapped at 520 feet the hole filled rapidly and made several flows. It was conservatively estimated at 35 bbls. According to operators at Glasgow, this is possibly the best well

(Continued on Page 104)

Twin Pillars of Transportation

Oil and motor trucks, each building up the other's strength, have become twin pillars of transportation. Trucks need oil. Oil needs trucks.

Many of the first White Trucks which went to work in the oil industry are still at work daily after a dozen years and more than 100,000 miles of service.

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The widespread and enduring preference for White Trucks is not peculiar to the oil industry. Other big industries, thoroughly organized to analyze results and costs, have shown the same preference—public utilities, retail stores, the building supply business, contract haulers, municipalities, and others.

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WHITE TRUCKS

Tonkawa Has Produced 34,352,916 Bbls.

One Square Mile Has Produced 10,489,864 Bbls. and One Lease Has Produced 138,746 Bbls. Per Well

By James McIntyre

While the Tonkawa Field in Noble and Kay Counties, Oklahoma, has figured prominently in recent American oil developments as one of the eight fields which precipitated an overproduction in 1923 and as one of the greatest high grade oil fields developed in the United States, it has recently been given new prominence by the discovery of a 4,000-foot pay sand from which a well of Thomas B. Slick and the Comar Oil Co. has been producing 2,800 bbls. a day.

Should the very deep pay extend over much territory it will stay the decline of production which the field has been suffering for months and greatly increase the per acre recovery of the territory, which even up to this time has been unusually large.

The Tonkawa Field from early in July, 1921, to April 2, 1924, produced 34,352,916 bbls. from 663 wells, an average of 51,814 bbls. per well. The leases on which production has been found comprise 5,360 acres, but some of the edge leases are only partly productive and the real producing acreage is considerably smaller than the figure given.

Discovery Well Later Abandoned

The discovery well, drilled by the Marlin Refining Co. & Cosden Oil & Gas Co. on School Land, in the northeast corner of Section 16-24-1w, Noble County, found the Tonkawa pay late in June, 1921. The north offset to the discovery well was dry and the original well itself, when deepened, drilled into water and had to be abandoned.

The heart of the Tonkawa Field is in Section 34-25-1w. This square mile of territory has produced 10,489,864 bbls. of oil, an average per acre recovery of 21,854 bbls. The southeast quarter of this section has produced 3,775,233 bbls., or a recovery of 23,595 bbls. per acre from 55 wells, and the north half of this quarter section alone produced 1,979,195 bbls., or 24,739.9 bbls. per acre, from 29 wells. This is the Endicott lease of the Comar Oil Co. and has been producing only since January, 1923. On April 2, of this year, it was making 1,746 bbls. a day, an average of about 60 bbls. a day per well. The next largest producing quarter section is the southwest quarter of Section 35-25-1w. The north half of this quarter, the Comar Oil Co.'s L. Endicott lease, has produced 933,492 bbls. from 23 wells, and the south half, Slick and the Comar Oil Co.'s L. Endicott lease, has produced 2,647,337 bbls., or a total of 3,580,829 bbls. Following comes the Gypsy Oil Co.'s Shawver farm, northwest quarter of Section 2-24-1w, which produced 3,451,838 bbls. from 69 wells, a per acre recovery of 21,574 bbls., and next the southwest quarter of Section 34-25-1w, McCaskey & Wentz' McKee farm, on which 42 wells have produced 2,577,403 bbls., or 16,108.7 bbls. per acre and 61,367 bbls. per well.

There are other interesting features in the development of the field.

An 80-acre lease in Section 35-25-1w produced 2,647,337 bbls. from 31 wells, or 33,091.7 bbls. per acre and 85,398 bbls. per well.

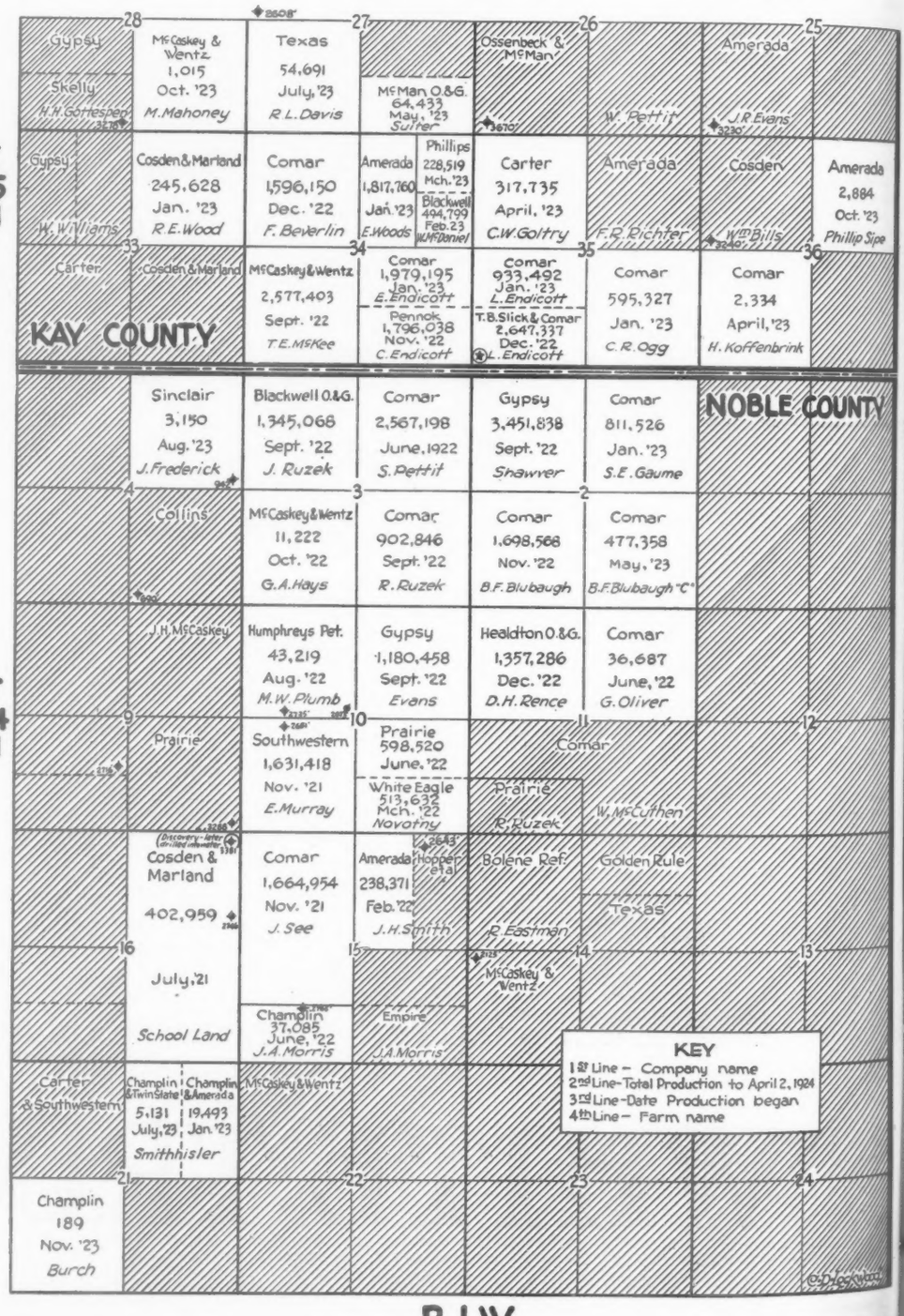
Fifteen wells on 160 acres in Section 10-24-1w have produced 1,631,418 bbls., of 108,761 bbls. to the well, and 12 wells on 160 acres in Section 15-24-1w, have produced 1,664,954 bbls. or 138,746 bbls. per well.

Comar's Immense Recovery

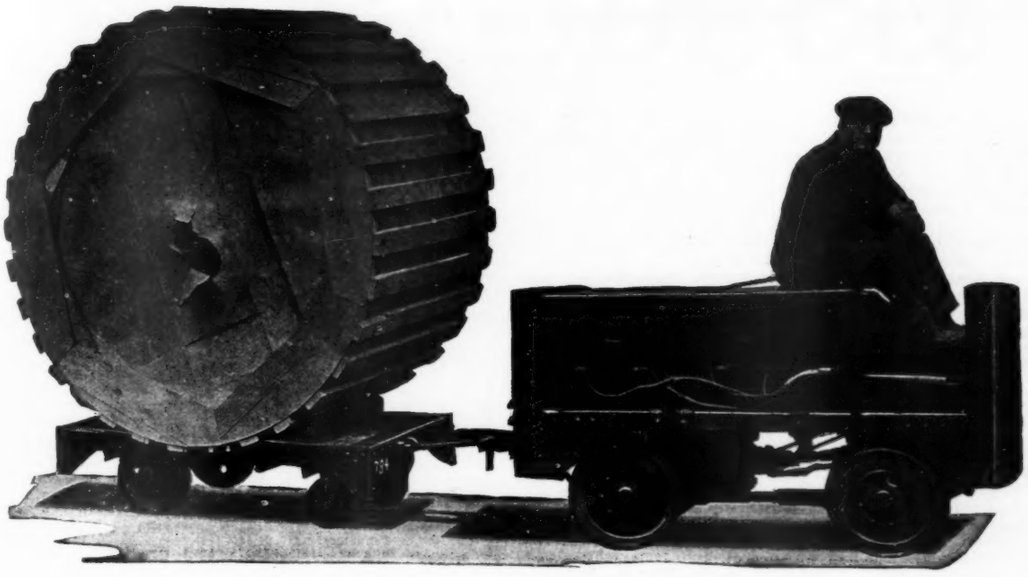
The Comar Oil Co., owned jointly by the Marland and Royal Dutch-Shell interests has had a production of 13,265,635 bbls. The Gypsy Oil Co. stands second with 4,632,296 bbls. and Thomas B.

(Continued on Page 60)

PRODUCTION OF LEASES IN THE TONKAWA FIELD, NORTHERN OKLAHOMA, TO APRIL 2, 1924



The combined production of the Tonkawa Field, shown in the above map by lease, was 34,352,916 bbls. up to April 2, from 663 wells. The discovery well in the northeast corner of Section 16-24-1w is shown and the new 4,000-foot-sand producer of Slick and the Comar Oil Co., in the southwest corner of Section 35-25-1w, is indicated by a star. As a matter of information the dry holes drilled inside and bordering the field are shown on the map.



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The whole tremendous output of Goodrich Belting was 99.87 per cent PERFECT.

Exacting tests of materials and rigid supervision of construction maintain a fixed standard of quality. A consistent policy of producing "goods destined for service" through fifty-four years of manufacturing experience is responsible for the high average of perfection in Goodrich Rubber Products.

THE B. F. GOODRICH RUBBER COMPANY

Akron, Ohio

ESTABLISHED 1870

Goodrich

BELTING

"Best in the Long Run"

(Continued on Page 66)

ering the field are shown on the map.

California's Natural Gasoline Industry

Difficulties in Development Disclosed by Experience of Past Year. Present Conditions and Prospects for the Future

By Charles F. Bevan

Address before third annual convention of the Association of Natural Gasoline Manufacturers, Tulsa, Okla.

To estimate the future development of the natural gasoline industry in California, we must first summarize the conditions existing during the past year. Only upon such a summary and consideration of present conditions can a forecast be based.

At the beginning of 1923 the three great fields of the Los Angeles Basin were undergoing a most extensive drilling campaign. The wells were prolific in production of high gravity oil and great quantities of gas. There were in January, 1923, 32 gasoline plants in operation, and 15 additional plants under construction in these fields.

The greater number of these plants in southern California were of the oil absorption type, with a few combination high pressure compression and absorption plants in use. There were many varieties of designs due to the sudden influx of gasoline plant men from all over the country. The general plan of the plants built was uniform, the variations being in the filler for absorbers and construction of heat exchangers and stills. The majority of plants were designed to utilize gas direct from the traps at the wells which maintained sufficient pressure to permit plants to be operated at pressures varying from 20 to 60 pounds. The residue gas from most of the plants was wasted to the air.

Increase in Industry

Production of natural gasoline in the remainder of the State had shown a gradual increase until at the close of 1922 there were 67 plants in the most settled productive areas. The total number of plants in the State was 100 with an estimated production of 450,000 gallons daily from the treatment of over 475,000,000 feet of gas. It is interesting to note the development of the natural gasoline industry during the past year as shown by the following data which shows production for the territory south of the Tehachapi:

DAILY AVERAGE FIGURES OF GAS TREATED AND GASOLINE PRODUCED

1923—		
January	202,000,000 ft.	117,000 gal.
February	236,000,000 ft.	188,500 gal.
March	418,000,000 ft.	313,000 gal.
April	409,000,000 ft.	231,000 gal.
May	540,000,000 ft.	278,000 gal.
June	576,000,000 ft.	356,000 gal.
July	725,000,000 ft.	381,000 gal.
August	833,000,000 ft.	443,000 gal.
September	916,000,000 ft.	472,000 gal.
October	894,000,000 ft.	529,000 gal.
November	865,000,000 ft.	530,000 gal.
December	885,000,000 ft.	580,000 gal.
1924—		
January	779,000,000 ft.	524,000 gal.

This enormous sudden increase in production naturally brought down the price. Notwithstanding this, the activity continued with no apparent abatement until in May, 1923, the older fields were partially or wholly shut down. This was followed by concerted action on the part of producers in the Los Angeles Basin to curtail activities until the overproduction period was passed.

The drop in price of crude and gasoline was anticipated but the continued low gasoline price was felt keenly by the producers.

The peak of crude oil production was reached in August, while the natural gasoline production peak came in December, 1923. This peak amounted to approximately 580,000 gallons of natural gasoline daily as against 530,000 gallons daily in November, 1923, the next highest month.

Additional Plants

During the year 1923 additional plants were constructed and placed in operation until at the peak, there were 135 plants producing natural gasoline in the State.

The following table gives the distribution of these plants with approximate daily productions and volumes of gas treated during February, 1924:

Location—	No. Plants	Vol. Gas in M ft.	Gasoline Prod., gal.
Coalinga	1	1,000	1,000
Sunset-Midway	31	95,850	124,600
Santa Fe Springs	28	242,000	222,000
Long Beach	17	235,000	156,000
Huntington Beach	16	60,000	65,000
Richfield	3	15,500	10,000
Torrance	8	11,600	7,800
Santa Maria	4	11,100	20,000
Ventura	7	10,000	9,900
Coyote Hills	7	1,655	1,500
Fullerton	7	16,350	19,000
Salt Lake (abandoned)	4	4,350	3,300
Newhall	1	260	780
Montebello-Whittier	5	4,960	1,500
Total No. of Tehachapi	32	96,850	125,600
Total So. of Tehachap	107	612,775	525,880
Grand total for State	139	709,625	651,480

Coincident with the peak of gasoline production came the sudden drop in oil production and gas volume and pressure. The volume dropped literally millions of feet per day. One producer admitted a drop in volume of gas treated at a single plant of 9,000,000 feet per day, or a drop of 12 per cent of volume of gas treated. This drop was covered by a two-day period and was due to the sudden loss of pressure throughout the field and not to the loss of any particular group of wells.

The small operator whose plants were built hurriedly to extract gasoline, but with low efficiency, from the excess gas available, found himself almost over night with a plant and no gas. Those who were able immediately set about installing compressing machinery and rebuilding their plants on a more efficient basis. But machinery was hard to obtain and expensive, and a great many of the companies were forced to relinquish their contracts and abandon their plants.

Moved to Newer Fields

About this time the Torrance-Redondo and Lomita fields were in the rush of development stage and several small operators moved plants to this field, thereby gaining temporary relief from the necessity of abandoning operations.

The larger operators with the installation of machinery took over the gas relinquished by these smaller operators and have, in most cases, been able to maintain production on a profitable basis. The recent increases in price, however, mark the actual turning point for the better from the producers' standpoint.

The older fields have again been opened up and production is now 80 per cent normal in the settled production areas. These fields have added their gasoline production to maintain a high average daily production.

The Los Angeles Basin fields are still declining, although the production curve is flattening out and I believe it is safe to say that production will drop off much more gradually during the next few years.

One condition which has already caused

(Continued on Page 84)

Tonkawa Field Has Produced 34,352,916 Bbls. of Petroleum

(Continued from Page 58)

Slick and the Comar Oil Co. 2,647,337 bbls.; McCaskey & Wentz, 2,589,640 bbls.; Amerada Petroleum Corp., 2,059,015 bbls. Four other companies have had over 1,000,000 bbls. production from the territory.

There are several producing sands in the field and some locations are occupied by four wells, each producing from a different sand. There is a 1,700-foot gas sand; and oil sands at 1,850, 1,970, 2,100 and the big pay sands lying between 2,500 and 2,700 feet. There is a 3,200-foot sand which has shown indications of oil in several wells and which is now the objective of a number of drilling wells, the showing having been good enough to warrant further testing. The 4,000-foot pay, recently discovered a break in the Mississippi lime, may be added to the others. This pay may be confined to a small area, or spotted over the field, but the first well to have found it was so large a producer that the sand will be given a thorough test.

At the close of this production report there were 66 wells drilling on locations already productive, while in all directions on the fringe of the field wildcatters are active in an endeavor to open new pools.

The accompanying table gives the production by leases of each company in the field, together with the production per acre and production per well of each lease.

Total Production of the Tonkawa Field, Kay and Noble Counties, Oklahoma, From Its Opening on June 29, 1921, to April 2, 1924

Location, farm, company, and month production began—	Acres	No. Wells	Total Production	Prod. per Acre	Av. Prod. per Well
S½ SE¼ 27-25-1w Sutter, McMan Oil Co., May, 1923	80	3	64,433	805.4	21,478
SW¼ 27-25-1w David, The Texas Co., July, 1923	160	5	54,691	341.8	10,938
SE¼ 28-25-1w Mahoney, McCaskey & Wentz, October, 1923	160	1	1,015	6.3	1,015
NE¼ 33-25-1w School land, Mariand Refining Co. and Cosden Oil & Gas Co., January, 1923	160	10	245,628	1,535.2	24,563
NW¼ 34-25-1w Beverlin, Comar Oil Co., December, 1922	160	49	1,596,198	9,976.2	32,576
N½ SE¼ 34-25-1w E. Endicott, Comar Oil Co., January, 1923	80	29	1,979,195	24,779.9	68,248
S½ SE¼ 34-25-1w C. Endicott, Pennok Oil Co., November, 1922	80	26	1,796,038	22,450.5	69,078
W½ NE¼ 34-25-1w Woods, Amerada Petroleum Co., January, 1923	80	29	1,817,760	22,722	62,681
NE¼ NE¼ 34-25-1w McDaniels, Phillips Petroleum Co., March, 1923	40	4	228,519	5,713	57,130
SE¼ NE¼ 34-25-1w McDaniels, Blackwell Oil & Gas Co., February, 1923	40	14	494,799	12,370	35,343
SW¼ 34-25-1w McKee, McCaskey & Wentz, September, 1922	160	42	2,577,403	16,108.7	61,367
SE¼ 35-25-1w Ogg, Comar Oil Co., January, 1923	160	12	595,327	3,720.8	49,610
N½ SW¼ 35-25-1w L. Endicott, Comar Oil Co., January, 1923	80	23	933,492	11,668.7	40,587
NW¼ 35-25-1w Goltry, Carter Oil Co., April, 1923	160	6	317,735	1,985.9	52,956
S½ SW¼ 35-25-1w L. Endicott, T. B. Slick and Comar Oil Co., December, 1922	80	31	2,647,337	33,091.7	85,398
SW¼ 36-25-1w Koffenbrink, Comar Oil Co., April, 1923	160	1	2,334	14.6	1,634
NE¼ 36-25-1w Sipe, Amerada Petroleum Corp., October, 1923	160	1	2,884	18.0	2,884
NE¼ 2-24-1w Gaume, Comar Oil Co., January, 1923	160	26	811,526	5,072.0	31,271
SW¼ 2-24-1w Blubaugh, Comar Oil Co., November, 1922	160	53	1,698,568	10,616.1	32,048
SE¼ 2-24-1w Blubaugh "C," Comar Oil Co., May, 1923	160	8	477,358	2,983.5	59,670
NW¼ 2-24-1w Shawver, Gypsy Oil Co., September, 1922	160	69	3,451,838	21,574	50,027
NE¼ 3-24-1w Pettit, Comar Oil Co., June, 1922	160	60	2,567,198	16,045	42,787
SE¼ 3-24-1w Ruzek, Comar Oil Co., September, 1922	160	21	902,846	5,642.2	43,135
NW¼ 3-24-1w Ruzek, Blackwell Oil & Gas Co., September, 1922	160	17	1,345,068	8,406.7	79,122
SW¼ 3-24-1w Hayes, McCaskey & Wentz, October, 1922	160	1	11,222	70.1	11,222
NE¼ 4-24-1w Frederick, Sinclair Oil & Gas Co., August, 1923	160	1	3,150	19.7	3,150
NW¼ 10-24-1w Plumb, Humphreys Petroleum Co., August, 1922	160	3	43,219	270.1	21,610
SW¼ 10-24-1w Murray, Southwestern Petroleum Co., November, 1921	160	15	1,631,418	10,196.4	108,761
NE¼ 10-24-1w Evans, Gypsy Oil Co., September, 1922	160	21	1,180,458	7,377.9	56,212
N½ SE¼ 10-24-1w Novotny, Prairie Oil & Gas Co., June, 1922	80	13	598,520	7,481.5	46,040
S½ SE¼ 10-24-1w Novotny, White Eagle Oil & Refining Co., March, 1922	80	7	513,632	6,420.4	73,376
NE¼ 11-24-1w Oliver, Comar Oil Co., June, 1922	160	3	36,687	229.3	12,229
NW¼ 11-24-1w Rence, Healdton Oil & Gas Co., December, 1922	160	24	1,357,286	8,482	56,553
W½ NE¼ 15-24-1w Smith, Amerada Petroleum Co., February, 1923	80	5	238,371	2,979.6	47,674
NW¼ 15-24-1w See, Comar Oil Co., November, 1921	160	12	1,664,954	10,406	138,746
S½ SW¼ 15-24-1w Morris, Champlin Oil & Refining Co., June, 1922	80	1	37,085	463.6	37,085
E½ 16-24-1w School land, Cosden Oil & Gas Co. and Mariand Refining Co., July, 1921	320	6	402,959	1,259.3	67,160
E½ NE¼ 21-24-1w Smithhisler, Champlin Oil & Refining Co. and Amerada Petroleum Corp., January, 1923	80	1	19,493	243.7	19,493
W½ NE¼ 21-24-1w Smithhisler, Champlin Oil & Refining Co. and Twin State Oil Co., July, 1923	80	1	5,131	64.1	5,131
SW¼ 21-24-1w Burch, Champlin Oil & Refining Co., November, 1923	160	1	189	1.3	189
Total	5,360	663	34,352,916	6,409.1	51,814

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OIL WELL DUNN TOOLS

COMES a time in the life of every drilling well when the need for speed is urgent. When the call comes, no matter what conditions, if you are running in or pulling out, you can get top speed if your crew is using a set of

DUNN Super ELEVATORS

(Automatic Link Release Type)

Dunn Super Elevators (Automatic Link Release Type) (Rotary Sizes Only)
Dunn Super Elevators (Regular Type) All Rotary and Casing Sizes

And Here's Why!

NO SLIPS—Follow the elevator coming down with a string (No. 1) Sketch shows it holding pipe, coming down, links in position. As the elevator comes to rest on table. (No. 2) the links are automatically released.

If it's speed you want, it must be DUNN

(No. 3) Two men remove links from elevator No. 1 and place them in position in Elevator No. 2 and they are all set to go.

Compare this one operation by two men with the various motions of removing and replacing slips.

Dunn Manufacturing Company

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DUNN SUPER ELEVATORS

Natural Gasoline in Straight Run Plant

Mutual Dependence of Manufacturer and Refiner in Effort to Meet Ever Increasing Demands for Motor Fuel. Fractionation Vital

By W. K. Holmes
Superintendent West Tulsa Refinery, The Texas Co.
Address Before the Third Annual Convention of the Association of Natural Gasoline Manufacturers, Tulsa, Okla.

About 24 years ago, as I remember it, I was working in an oil refinery in one of the eastern States and my work at that time consisted of assisting the loading rack man. Aside from loading tank cars it was our duty to fill the steel drums, and I recall one commodity in particular and that was a gasoline of about 80 to 86 gravity. This was called by a lot of different names, mostly liquid gas, and I remember the tanks containing this liquid were inside of a building where cold water was sprayed upon these tanks in order to keep the liquid cool so the safety valves would not be continually blowing. I also remember as soon as we had the drums loaded and put upon a wagon for delivery to the freight house wet blankets were used to cover up the drums so they wouldn't get warm between the refinery and the freight station and cause a blowup. I later found out this gasoline was used in canning factories for soldering cans. However, the demand was not great.

I do not recall that we loaded any great amount of ordinary gasoline; but we did load large quantities of kerosene, known as burning oil, fuel oil and lubricating stocks. I also well remember the first automobile I ever saw. I say it was an automobile but it wasn't. It was supposed to be a truck built like a wagon with wooden wheels and steel rims, the same as the present day lumber wagon. This truck had a one cylinder engine and some times it would run and some times it wouldn't, mostly wouldn't. How little did I dream at that time that old Dobbin and the fancy driving horses were surely doomed in a very short time.

When a Car Drew Crowds

Recently I had a friend of mine tell me about the first automobile he ever had, which he purchased in Kansas City, at which time he told the man from whom he purchased it that he was going to drive that machine to Tulsa. The next morning the Kansas City papers published a large news item that a man had arrived from Tulsa, purchased an automobile and was going to drive it to Tulsa. The people in the little towns along the way turned out to see this new method of travel and in one little town where this man stopped for dinner quite a crowd of people had gathered to see this modern vehicle and one old long-whiskered gentleman, after carefully looking over the machine, made this remark: "Boys, I want to tell you that is the coming way of going." I doubt if he realized the truth of his prophecy.

As we all know, the growth of the automotive industry has been so rapid that it has been almost impossible for the human mind to conceive of the development of that industry for, at the present time, we have over 15,000,000 automobiles and, unlike the first one I ever saw, most of these 15,000,000 automobiles mostly run, wherein the first one I ever saw mostly didn't.

Must Hustle to Keep Up

In order for the oil industry to keep pace with the tremendous growth of the automotive industry it has been necessary to make a world-wide search for a supply of oil from which to make gasoline and lubricating oils to suuply the heavily increased demand not only for automobiles, trucks, and tractors but thousands of other internal combustion engines, which use gasoline as a fuel and lubricating oils, which are produced from the same source as gasoline. We all remember distinctly, in fact those of us who live in the Mid-Continent Field have not forgotten the great overproduction of crude oil in the past year, but in the production of these great fields of oil we do not find the same character of oil that was found in the Pennsylvania fields. We found that it did not contain anywhere near as much gasoline as the eastern oil contained. However, it is true that in some locations small fields of oil were found that compared favorably with the eastern product but the greatest portion of the production was of heavier oils, which do not contain the lighter portions of gasoline which are so necessary for the present day automobiles.

Let me say right here that the automobile of today has developed, as we all know, to a point of near perfection and it requires a fuel made in the same careful way if we are ging to expect the machine itself to have the life for which it is designed. It also seems that as our great developments are perfected necessity must step in and secure that something which is required to fill the requirements in order to satisfy the heavily increased demands for such commodities, and this thought takes me back about 20 years ago when I recall seeing a pump station in Pennsylvania, which was pumping gas from the gas wells to the city for domestic purposes, and the one thing that impresses me now is that I saw the engineer draw out from the suction lines and discharge lines a liquid that smelled like gasoline, and it looked like gasoline, and I still believe it was gasoline; but little did I believe at that time that it was a starting point of that particular product which today is so vitally necessary to the straight run refiner in helping him to market the heavier bodied gasolines, which he produces from the heavier grades of crude oil where he has larger percentages of the heavier portions and only a small percentage of the lighter. That particular product, which he must have if he markets his product, is natural gasoline; and by the proper compounding of his straight run product together with the natural gasoline all of the requirements of the present day specifications can be met. This is the same identical product I saw some 20 years ago and did not recognize.

Improved Refining

During the past 10 years, as I mentioned before, the developments of the refining industry have been tremendous, in order to keep up with ever increasing demands. However, you of the natural gasoline industry have not been asleep during these 10 years; and your industry has in the past 10 years been brought from a very crude method of handling to a point of scientific manufacture of natural gasoline. In order for us to make a little closer check as to how necessary this product is to the straight run refiner let us analyze our present day specifications of the different grades of gasoline now being demanded. By referring to The Oil and Gas Journal, we find a page devoted to refinery and crude prices and we find gasolines listed as follows:

58 to 60 Gravity—437 End—Point—New Navy Gasoline.

60 to 62 Gravity—400 End Point Gasoline.

64 to 66 Gravity—375 End Point Gasoline.

68 to 70 Gravity—350 to 365 End Point Gasoline.

This shows that a light grade gasoline must be produced to fill the demands. On the other hand, we have a large number of the different Mid-Contiment crudes, including Oklahoma, Kansas, parts of Arkansas and even Texas, crude oils which upon analysis show something in their first distillation as the following:

	Sample No. 1	Sample No. 2	Sample No. 3	Sample No. 4	Sample No. 5	Sample No. 6
Gravity	31.1	37.2	31.6	37.0	32.0	30.1
Over	190	134	170	132	190	190
10 per cent	320	254	342	234	344	324
20 per cent	418	324	422	302	426	444
30 per cent	...	...	...	372	...	...
40 per cent	...	...	...	452	...	...
Gravity of distillate	47.1	57.1	50.6	55.1	50.5	46.9

One Thing Lacking

You will notice that in all of these distillations taken from various fields they show one thing lacking, which is of importance, and that is the over point or the start of distillation. You will notice that only one of these samples shows a stock from which we could make a reasonable percentage of 58.60 New Navy specification gasoline directly from the crude oil itself. Now on the other hand, let us stop a moment and look at your production of natural gasoline taken from approximately the same localities as the samples of crude oil were taken and we find that you produce stocks about as follows:

	Sample No. 1	Sample No. 2	Sample No. 3	Sample No. 4
Gravity	87.5	76.9	76.6	73.5
Over	74	72	80	84
10 per cent	104	92	100	78
20 per cent	118	110	114	90
50 per cent	176	162	158	138
70 per cent	220	220	192	184
80 per cent	260	260	214	286
Yield, per cent	86	88.5	92	83
Loss, per cent	14	11.5	8	17

In the careful analysis of these various samples of natural gasoline we find with the exception of one thing, that particular stock which is indeed valuable to the straight run refiner, and that one particular thing is the loss in distillation. When we stop to consider that these distillations are made in laboratory equipment using ice water in the condenser and have a loss as high as 17 per cent, what are we going to have when making the distillation with the ordinary Oklahoma water, which we use in large condensers? That is one of the main reasons why the straight run refiner sidesteps some one particular natural gasoline plant's product and makes friends with one of your neighbors who produce a sample like Sample No. 3, which shows a loss of less than one-half that shown in Sample No. 4.

Mutual Need for Help

Now that we have taken a view of two different kinds of products, our relationship between the straight run refiner and the natural gasoline manufacturer clearly shows that neither one can get along with any degree of satisfaction if one takes one side of the street and the other walks upon the opposite side. However, with the two locking arms and going up the middle of the road, each helping the other, we find that by the combined efforts of the two, a product, one mixed with the other in the proper percentages produces stocks of gasoline meeting the 58-60 New Navy specification gasoline in all of its requirements.

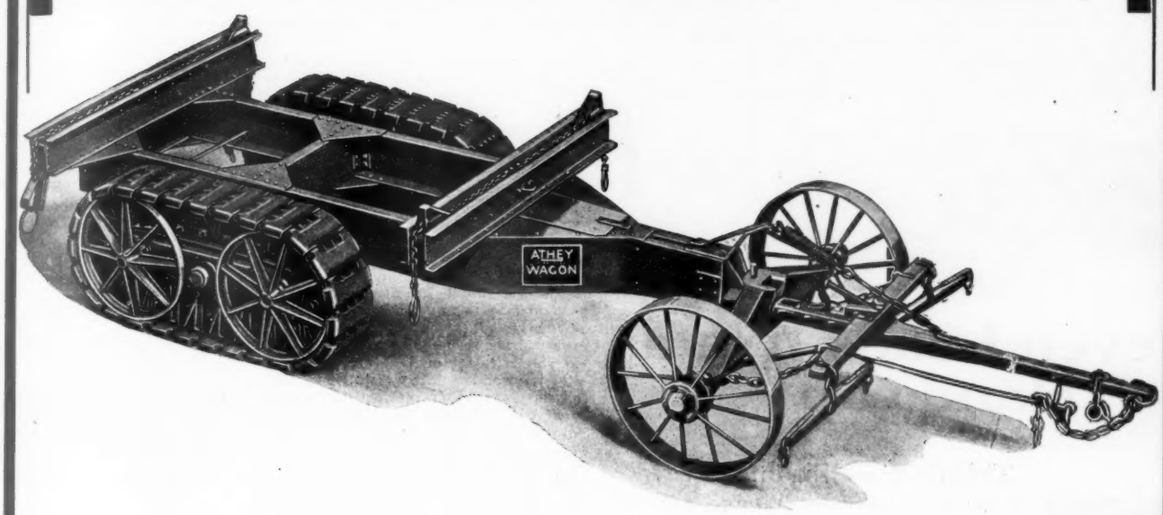
As I have mentioned to you before, the growth of the natural gasoline industry has indeed been very rapid and we find today an industry which cannot afford to produce to the general public anything except the best possible quality of gasoline. If you are going to be of the maximum amount of assistance to the straight run refiner your stocks will show the least percentage of loss in distillation together with an over point not too exceedingly low and this will be the particular product which will give the refiner the most assistance. On the other hand, the refiner who turns out the most uniform stocks of gasoline is that particular refiner who uses the most care in blending the proper amounts of natural gasoline with his straight run product. We all know that straight run refinery gasolines will absorb and hold a certain amount of the lighter portions of natural gasoline but they do not do so well if too large percentages are used as this is the direct cause of undue loss in storage, in transit, at the sales stations and even in the automobile. Therefore, in my opinion we should each use our best efforts to see that we do not find upon the markets mixtures of natural gasoline with a product commonly known as kerosene oil, which shows a distillation with an over point as low as 70 and an end point as high as 500. This kind of a product has been found in various places, and is indeed poor advertising to the oil industry and should be looked upon by both the straight run refiner and the natural gasoline manufacturer as poor business for the reason that it does not produce a uniform fuel which would give satisfactory results in automobiles, for the reason that a mixture of this kind contains both ends and no middle.

Look Into Future

If I were to glance into the future and make any predictions of the future demands upon our natural resources so far as gasoline is concerned, I would say it is going to take the combined efforts of all concerned in the oil industry to produce a sufficient amount of gasoline to fill the ever increasing demands and that every effort is going to have to be used in saving and using judiciously every ounce of gasoline which can be produced and this condition can be brought about only by the close cooperation between the straight run refiners and the natural gasoline manufacturers in the careful study of the two products together with the careful mixing and blending.

The modern refiner has equipped or is now equipping to save something that the modern packing plants have not been able to save—and that is the smell. The odor of gasoline in an oil refinery means waste, and waste means money.

More and more attention is being paid every day to the recovery of gasoline from refinery gases. Both compression methods, as well as combined methods are being resorted to. In many instances the quality of the final product has been



Heavier Loads—No Stalling In Mud —Less Power Per Ton

ATHEY Wagons (1) reduce the **number** of hauls to transport a given tonnage, for they carry capacity 10-ton loads over the deepest mud.

They (2) reduce the **time** for each trip, because they travel easily and rapidly over mud and sand, and do not mire.

They (3) reduce the **horsepower** required for each ton hauled, because of the ease with which the very worst going is traversed.

These 3 reductions each mean a substantial saving of money. ATHEY Wagons thus pay for themselves quickly. They are exceedingly durable, and will serve for years after this payment is completed.

One of the largest sugar operators in Cuba is now using over a million dollars worth of this equipment in the Cuban cane fields.

Write for full information and quotations.

ATHEY TRUSS WHEEL COMPANY
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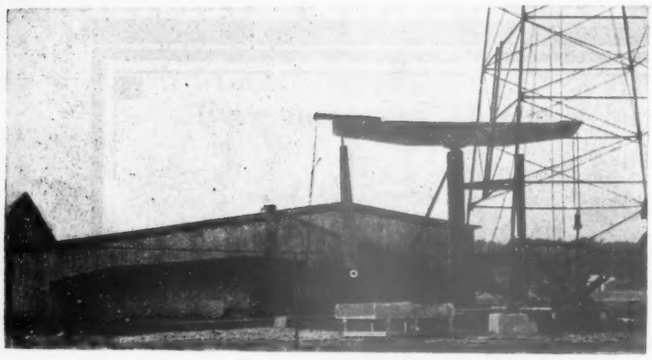
ATHEY TRUSS WHEEL WAGON
IT BRIDGES THE SOFT SPOTS



Uneven Loads Are a Handicap

H. G. Durnell

This deep well is one of several on the same lease that are being pumped by a Durnell Underpull Pumping Power.

It will be noted that in this particular case, the pitman is tied back out of the way and the walking beam is used only for counter-balancing.

Continuous or part time operation offers no handicap for a Durnell Power. In this case some of the wells are 8-hour pumpers, others are 16 and 24. The power is precisely balanced, properly taking care of the uneven load.

Specify a Durnell Underpull Pumping Power and assure yourself continuous and economical operation.

Talk with our representatives or Durnell will give you the "personal touch" of the factory. Write.

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Holdenville	Hominy		
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Drumright			Sunburst

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BARTLESVILLE, OKLA.

5

much improved by properly scrubbing the gases from which the gasoline is to be recovered. Gas gathering systems materially reduce refinery losses and increase profits. A gas gathering system in a refinery is very similar to the gathering system used in the field. The final product, however, is very different with regard to stability. In the very nature of the process, the fixed gases which would cause trouble are removed. In the few cases in which they are not, it is a relatively simple matter with the equipment which the refinery has as its disposal to remove them by fractionation with very little attendant loss.

Value of Fractionation

A recovery system finds its application to gases from a variety of sources. Receiving tanks are probably the greatest offenders in the matter of losing gasoline by vaporization, and, too, it is surprising to find out how much gasoline can get away with "tail" gases. Long periods of storage are attended with considerable losses; and it is, of course, well known that new methods of handling in sure storage seems to be the logical thing. It stands to reason that nothing can be lost from an absolutely tight tank. Loading losses are often considerable; but can very well be taken care of through the use of tight dome covers with suitable connection to the recovery system.

I have used the word "fractionation." That word is to become such an important thing in our industry that it would not be out of place for us always to write it in capital letters. The benefits of careful fractionation have been impressed on the refiner very forcibly in the last very few years. He has found that by replacing the obsolete air condenser with even a crude fractionating tower his yields have been increased and he has been enabled to get out all of one fraction before starting on another. Carefully designed fractionating equipment is absolutely one of the best investments a refiner can make. The fractionating equipment which forms a part of certain cracking processes has effected enormous savings by reason of obviating the necessity of rerunning and by enabling the operators to secure a uniform product.

It is but natural that you manufacturers of natural gasoline have been neglecting fractionation as a process vital to your industry. You are after one liquid product—natural gasoline. Your natural gas contains no component of higher boiling point than that of natural gasoline. It would seem that there is no call for fractionation. But there is. The fixed natural gases show a great tendency to dissolve in a liquid product. Their presence is very detrimental. They cause greater distillation losses, and raise vapor pressures alarmingly. So far, no method has come into general use for removing them without great losses of valuable gasoline components. It has been shown that by the proper application of the principle of fractionation to natural gasoline, these fixed gases may be entirely removed without any loss whatever of the components which are recognized as real gasoline constituents.

Increasing Recovery

The recovery from a gas well can be made nearly 100 per cent. It would be hard to estimate how much has been lost through lack of an efficient means of making a clear-cut separation between gasoline and gas. It is absolutely certain, however, that if the natural gasoline industry will begin to apply the principles of fractionation like the refiner has done, many plants which are now operated at a loss can be made to show a profit. It would seem that the thing that is needed by the natural gasoline manufacture is more experimental work. The refiner is certain of his raw material. His entire energy is given over to handling it efficiently, and improving his methods of manufacture. He has found that the best means of progress lies in experimental work. Your natural gasoline business, however, is one in which much energy must be spent in getting raw material. You are necessarily running around the country after new sources of supply of natural gas. Your main energy is often spent in "getting the gas." You may possibly have become so accustomed to seeing gas escaping from a new "gasser" which has not been placed under control, that you are not duly alarmed at the knowledge that rich gas is getting away from your plant. When it is gone, it leaves no evidence behind it. Although it doesn't look bad like a quantity of crude oil spilled on the ground, it is just as great and an even greater loss. All of the real loss attendant on the manufacture of natural gasoline can be done away with by a proper application of the principles of fractionation.

In conclusion, let me say that the two industries depend more upon each other than almost any other two that I can think of. We need your product; you need ours. It is only through intelligent cooperation that either the natural gasoline industry or the refining industry can reach its highest development, and make ready for the period of shortage of natural resources that so many are predicting.

New French Oil Co. Formed for Working Of Turkish Petroleum

At a statutory meeting of the new French Compagnie des Petroles held in Paris the company was definitely constituted. This concern was promoted under the auspices of the French Government, and its first and principal asset consists of the working of the 25 per cent participation due to France in the Turkish Petroleum venture, in which the Anglo-Persian, the Royal Dutch and an American group are interested. The capital has been fully taken up by 90 subscribers, among whom are the big French banks, oil importers and refiners, and a number of oil companies with French capital. It is stipulated that the board of directors must be exclusively composed of French citizens, approved by the Ministers of Finance and of Trade. Moreover, the French Government is to appoint two commissaries, whose duty it will be to see that all the rights of the State are strictly observed. These officials will take no part in the internal management of the concern.

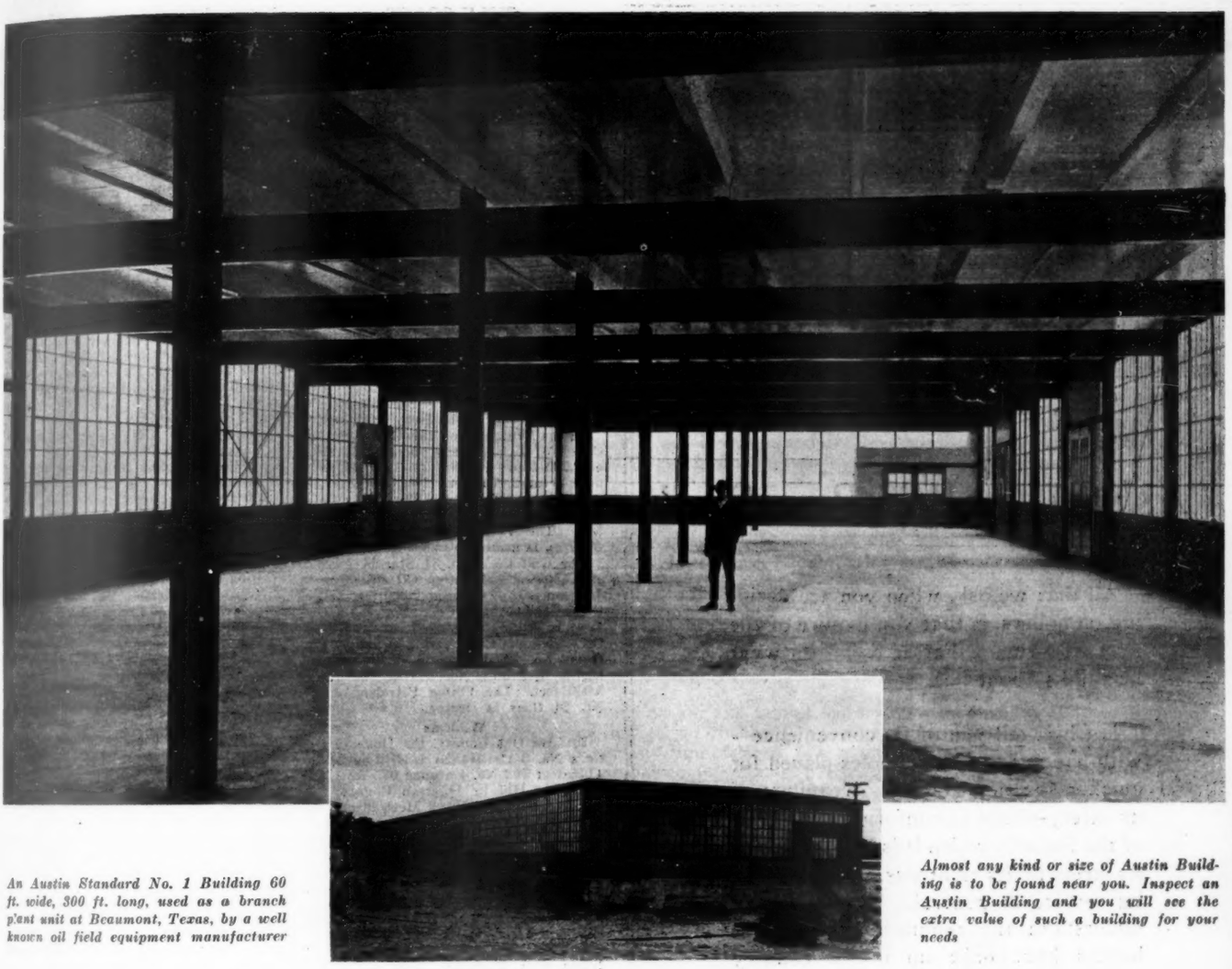
Without mentioning the names of the members of the first directors, the London Financial News gives the various concerns and syndicates actually represented on the board, who will be called upon to realize the national French policy in the oil problem.

Here is the list: Messieurs Andre et Fils, Cie Francaise et Roumaine, Banque de l'Union Parisienne, MM. Desmarais, Cie Francaise des Carburants, Omnium International des Petroles, Credit Mobilier Francais, Banque de Paris et des Pays-Bas, Cie Lille-Bonnieres, Cie Auxiliaire de Navigation, Banque Nationale de Credit, Cie Pechelbronn, Societe Limanowa, Petroles de l'Afrique du Nord, Cie Industrielle des Petroles, Cie Gle. des Huiles et Petroles, Raffinerie de Petrole du Nord, Comite Francais des Petroles de Pologne et Dabrowa, Credit Lyonnais, Societe Generale Comptoir d'Escompte, Petrofina, Petroles "Premier," and the French Standard Oil.

M. Ernest Mercier, a high authority in the French industrial world, who has been commissioned by M. Poincare with the study and the organization of the new concern, has been appointed president.

PROSPECTING IN NEW GUINEA

Only companies incorporated under the laws of the territory are eligible for prospecting licenses and leases in New Guinea, according to a report from Melbourne to the United States Department of Commerce, which states that a law to this effect became operative in January.



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Austin buildings come in standardized units capable of modification to meet purchaser's special requirements; they can be erected quickly; they are of permanent construction; and they give a maximum of usable, daylighted floor space. They are most economical, both in first cost and in years of usefulness.

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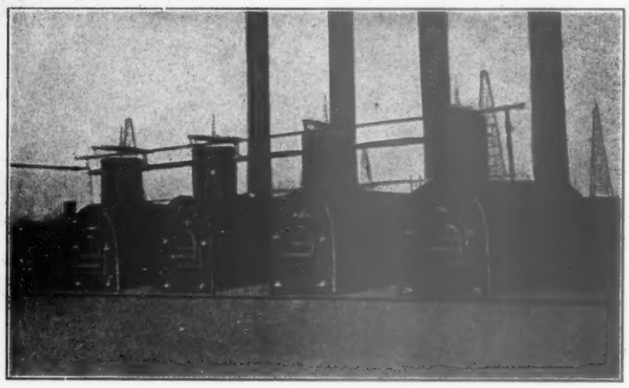

Photograph of four 45 H. P. F & T Boilers in operation for the Tidal Oil Co. on its Thompson Farm, near Corsicana, Texas

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Let him tell you of its convenience—with handholes and manholes placed for quick inspection and easy cleaning; of its safety—built to conform to the laws of the State in which it is to operate; of its strength, its tightness, its roominess, its service in general. Then you will understand the reputation that these boilers have built up in oil country work.

Sixty years of experience is back of Farrar & Trefts—your guarantee of the very best that can be made. There is a model for every oil country need. Write for particulars.

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Steam Boilers

110

GULF COAST

(Continued from Page 52)

around 1,000 bbls., then suddenly dropped to 40 bbls. and was being worked over when the casing dropped.

South Louisiana Pools

In the Edgerly Pool, the Green Oil Co.'s No. 46 Moore is making 200 bbls. of fluid, five bbls. of oil, at 3,175 feet.

The Gulf Refining Co.'s No. 22 Bright-Penn is deepening at 2,800 feet. A. L. Gibson's No. 2 Landry is drilling at 2,987 feet. G. W. Gary's No. 7 Lilliard is deepening. The Lake Charles Oil Co.'s No. 5 Fairchilds is fishing at 1,080 feet.

In the Jennings Pool, the Fontenot Oil Co.'s No. 5 Fee is bailing at 1,810 feet.

The Texas Co. is deepening No. 19 Latrielle from 1,850 feet, where it showed salt water and some oil. The Gulf Refining Co.'s No. 32 Jennings-Chicago is deepening. F. I. Getty's No. 11 Chicago-Jennings is drilling at 2,155 feet. The Rycade Petroleum Co.'s No. 2 Latrielle is drilling below 3,075 feet.

In the Vinton Pool, the Gulf Refining Co.'s No. 35 Vincent is pumping 35 bbls. at 2,235 feet. Its No. 31 G. N. G. is a pumper at 2,470 feet. No. 34 G. N. G. is bailing at 2,635 feet. The Texas Co.'s No. 24 Gray is a 50-bbl. well at 2,300 feet. The Vinton Petroleum Co.'s No 45 Gray is making 50 bbls. at 2,255 feet.

The Gulf Co.'s No. 31 Star is drilling at 2,450 feet. The Sun Oil Co.'s No. 2 Johnson is shut down at 2,800 feet. The G. B. and F. Oil Co.'s No. 7 Luckey Four is drilling at 1,925 feet. The Just Oil & Refining Co. is trying to pull screen from No. 2 Lyons to drill deeper. Marrs McLean's No. 5 Gray is below 3,000 feet. The Vinton Petroleum Co.'s No. 24 Gray is rigging.

Wildcats

In Live Oak County, the Houston Oil Co.'s No. 3 Cartwright is drilling below 4,055 feet and No. 4 around 975 feet.

At Big Hill in Jefferson County, the Houston Oil Co.'s No. 2 McFadden is at 2,965 feet and No. 4 Staiti at 565 feet.

At Hockley in Harris County, the Texas Exploration Co.'s No. 17 Warren on the north side is coring the formation at 2,340 feet. No. 18 Warren on the northwest side is below 520 feet. Big Hill and Hockley are salt domes.

The Carter Oil Co. is rigging No. 2 Hines, near Birkeville, Newton County. It abandoned No. 1 Weir some time ago at 3,000 feet.

Laredo Districts

The Laredo districts are showing more activity and in many cases the product is bringing a slight premium over the posted prices of 80 and 85 cents. The districts have a total of 256 producing wells and 35 gas wells. These are divided as follows: In Webb County, Schott district, 132 oil wells and 6 gassers; Aviators district, 37 oil wells and 2 gassers; Mid-Ojulas Pool, 32 oil wells and one gasser; Wolcott Pool, 10 wells. The Andrews and Bruni districts have one gasser each, with six gas wells in the Caroline-Tex section and 13 gas wells in the old Rieser gas district.

In Zapata County, the Mirando Pool has 23 oil wells and 2 gassers, the Jennings Pool has 3 wells and the old shallow sand section has 21 wells, although not all are pumping. There is one gas well in Jim Hogg County.

In the Schott-Mirando Pool in Webb County, Allsworth Brothers' No. 4 is a derrick with No. 1 on Block 20 starting. The Carnahan Producing & Refining Co.'s No. 17 is being deepened with a derrick standing for No. 59. Kirkpatrick & Lucas are setting casing in No. 2 and the Schott Oil Co.'s No. 2 has started with a derrick for No. 14. In the Aviator Pool, the Cornhuskers Oil Co. is drilling No. 2 and has a derrick up for No. 3. The J. K. Hughes Development Co. is drilling in No. 10. The Rio Grande Oil Co. set casing in No. 8, as did the Black Panther Oil Co. in No. 9. The Radio Oil Co.'s No. 6 is drilling and the Andrews Petroleum Co.'s No. 3 is below 2,200 feet.

The Weslaco Oil Co.'s No. 2 in the Wolcott district is fishing at 1,748 feet. The Magnolia Petroleum Co.'s No. 5 is drilling with a machine and casing is being set in No. 6. The Caroline-Tex Oil Co. is having water troubles in No. 6 at 900 feet and will probably move derrick to another location. Some company has a location for No. 2 Schrum. Morgan & Gibble will test No. 2 next week. In the Edington district, J. K. Hughes Development Co.'s No. 9 is setting casing and No. 10 is bailing. In the Mid-Ojulas Section, the Shasta Oil Co.'s No. 5 Garcia is setting casing and Wheatley and others' No. 7 is drilling around 700 feet. The Laurel Oil Co.'s No. 9 is idle due to litigation.

H. H. Palmer is taking a core of the formation in No. 2 at 1,710 feet. Chandler & Gear set 6-inch casing in No. 3 at 1,660 feet and surface casing in No. 5 with a derrick up for No. 6. In the Andrews gas section, R. S. Howard's No. 1 is drilling around 1,100 feet. The Andrews Petroleum Co. has a location for No. 3 east of the gas well. The Witherspoon Oil Co.'s No. 2 at Oilton is drilling around 2,10 0feet. The Cole Petroleum Co. is rigging No. 4 at Bruni, and Ryan and others' No. 1 is shut down at 1,100 feet. Neal and others' No. 1 fee is deepening from 2,045 feet where it bailed dry.

The A. D. J. Syndicate's No. 2 Pratt, southwest of Encinal, Webb County, is drilling below 3,840 feet. The Humphreys interests are rigging for No. 1 in the northwest part of the county. Barnhart and others' No. 1 is reaming at 350 feet.

The Associated Oil Co., a Southern Pacific Railroad subsidiary, has entered Webb County, purchasing the holdings of the Black Panther Oil Co. in the Aviator district. The property consists of seven wells with a daily average of 800 bbls., on 120 acres. The consideration is reported to have been $300,000 cash. The Black Panther Oil Co. was organized by Laredo residents with a capitalization of $15,000. The original stockholders will receive $20 for $1 invested.

The Associated Oil Co. is also drilling a wildcat test on the south side of the Stratton Ridge Dome, in Brazoria County, in the Gulf Coast region. The bit is below 2,200 feet, the log showing the formations to be running higher than on the northeast side of the dome, where some small production has been developed between 4,600 and 4,700 feet.

In Jim Hogg County, in the border section of the State, the Weber Oil Co.'s No. 1 is drilling below 3,000 feet. Pippin and others' No. 1 is bailing at 1,700 feet and Tyson and others' No. 2 is drilling around 1,135 feet. The Zapata Oil Co.'s No. 1 is around 1,600 feet. The United Packers Oil Co. got hot salt water in No. 1 Ward ranch at 1,538 feet and quit the hole. It was tested in 30 feet of sand.

In Duval County, A. H. Smith is starting No. 2 on Palangana Dome. The Union Sulphur Co. is drilling No. 2 Sweden. The Progress Oil Co.'s No. 1 is deepening below 900 feet. The Humble Oil & Refining Co. is starting No. 3 Welsh, south of the Piedras Pintas Pool.

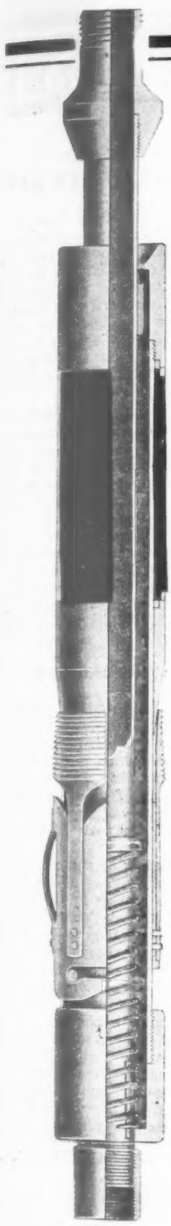
In Lavaca County, the test 5 miles north of Sublime is showing gas at 1,100 feet. Reynolds and others' No. 1 Butler, 6 miles east of Kennedy, Bee County, is drilling below 900 feet.

Over in East Texas, Wilcox and others' No. 1 in Jasper County, is drilling below 3,000 feet. McFarland & Fink's No. 1 in the southern part of Angelina County, is showing some gas at a shallow depth. In Washington County, southwest of Brenham, Fitzsimmons and others' No. 1 is in chalk at 1,060 feet.

Guadalupe County

A number of wildcat tests are drilling in various parts of Guadalupe County, following the extension of the Luling Field across the San Marcos River into that county. Near Seguin, the West Production Co.'s No. 1 Bear is setting 6⅝-inch casing. Allen Burham and others' No. 1 Imhoff is drilling below 2,000 feet. The Dixie Oil Co.'s No. 1 Meidhofer is around 1,300 feet. McCal-

(Continued on Page 78)



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Packer Set

This packer has been run in wells flowing 2500 barrels

Not only is the GUIBERSON Control Head Packer the best all-purpose packer on the market, but it was especially developed to fill the urgent need for a packer that could be **run in flowing wells against heavy pressures.**

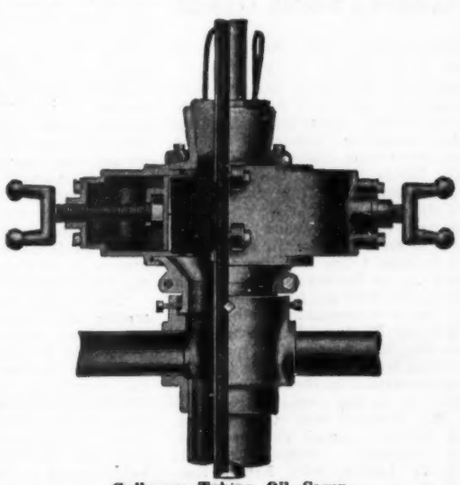
For running in flowing wells it is preferable to use this packer with the GUIBERSON Tubing Oil Saver, shown below. A disc is placed in tubing between perforations and working barrel, to prevent flow through tubing. Tubing Oil Saver is then opened wide to admit packer, after which rubbers are closed around tubing. Packer runs down the well with its valve at top wide open, permitting free flow of oil and gas between packer and tubing.

When packer reaches destination, preparations are made for deflecting flow to tubing, disc is broken, and packer is set. This operation, closing the valve, effects a gas-tight pack around the tubing, and deflects flow of well to the tubing.

Passage between packer and tubing can be re-opened at any time by lifting the tubing a few inches, which opens the valve. The packer can be easily re-set higher or lower at any time desired. When pulling out, the valve again opens wide, preventing any swabbing effect. These features place this packer in a class by itself.

GIVES CIRCULATION AROUND TUBING ON ROTARY WELLS. Where it is desired to bring in heavy pressure rotary wells through tubing, this packer is especially valuable, as it permits washing out the well through the tubing, the packer valve being left open for this purpose. When washing is completed valve is closed, and well is brought in by sawbbing or pumping through the tubing.

PACKING MAY PREVENT SANDING UP. Where wells flowing through casing show a tendency to sand up, packing and flowing through tubing may prevent sanding up, by increasing the pressure on the sand. The Control Head Packer, in such a case, gives the operator complete control of the situation. Flow can be confined to tubing or released through casing at will.



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GUIBERSON

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NATURAL GAS DEVELOPMENTS

LIST OF INDUSTRIES IN WHICH GAS IS USED

BARTLESVILLE, Okla., April 21.—The gas division of the Empire companies, in addition to serving more than 1,000,000 people with domestic gas service, has another and very interesting phase of the industry which they serve in a large way. The industrial department of the gas division has compiled a list of commodities which are manufactured with power and heat generated by natural gas furnished by the Empire companies. This list will no d ubt prove interesting to every member of the organization, because of the diversified industries which have selected and rely upon natural gas for power and heat. The list of products are as follows: Flour, meat, packing plant products, ice, cement, lime, dynamite, black powder, nitric acid, sulphuric acid, oil refining, core baking, electric power generation, bakeries, laundries, salt, (table salt, coarse salt, rock salt), city water supply, lead and zinc mining, manufacture of paint, lead oxides, lead pipe, tools and machines, brick and tile, c ndensed milk, ice cream, plaster board and paper products, glass and metal enameling.

Many cities and towns in Kansas, Oklahoma and Missouri are represented in the list. Natural gas for industrial and semi-industrial purposes is gaining favor. The high efficiency of gas and its flexibility of control has a distinct appeal to the industrial customer compared with solid fuels. This industrial business is handled as an "off peak" load at times when the gas is not needed for domestic purposes. This arrangement serves to equalize the load throughout the year on the gas wells, compressing stations and pipe lines.

COTTON VALLEY AND SAREPTA FIRMS MERGE

SHREVEPORT, La., April 19.—A merger of the Belchic & Laskey interests with the Oil Fields Gas Co. has been effected, capitalized at $1,000,000, fully subscribed. Both companies own valuable producing properties in the Sarepta and Cotton Valley gas fields and the Oil Fields Gas Co. completed the first producing oil well in the Cotton Valley district.

The new company, which will continue to be known as the Oil Fields Gas Co., is building a line from the Webster gas field to the Bellevue district, which it will furnish with gas for drilling operations, and is contemplating a line from the Webster Field to Haynesville and Homer for the purpose of supplying these towns with gas as well as fuel for drilling operations in these districts.

Officers of the new company are: President, Ray O'Brien; first vice president, George Belchic; second vice president, Alfred Glassell; secretary-treasurer, Charlie G. Laskey, with Ernest Ratcliff, C. W. Brown and George O. Baird completing the board of directors.

KERN COUNTY GAS LINE

TAFT, Cal., April 19. — The Kern County Land Co. has granted to the Midway Gas Co. the right of way to lay a pipe line for gas 8 feet in width commencing 1.361 feet west of the northeast quarter of Section 28-11-20, running 8.327 feet and commencing 2,145 feet south of the northwest corner of Section 15-11-20, and running to the main line of the Midway Gas Co. James O'Neil and James A. McKenzie have granted the same privilege to the Midway Gas Co. on Sections 3 and 12. The right of way of the latter two properties is 10 feet in width.

LINE FROM BAXTER BASIN

CASPER, Wyo., April 19.—While no definite announcement has been made, it is generally understood that the Producers & Refiners Corp. will go ahead the coming summer with its plan to pipe the town of Rock Springs for natural gas and lay a pipe line from the Baxter Basin Field to that place. The line would be 15 or 16 miles long and would probably be laid with either 6-inch or 8-inch pipe. It was planned to lay this line last year and part of the material is already in storage at Rock Springs.

DRILLING CAMPAIGN FOLLOWS URANIA WELL

SHREVEPORT, La., April 19.—The completion of the big gas well on the Central Lumber Co.'s land in La Salle Parish is heralded as an event of utmost importance in oil annals and will probably be followed by intensive drilling in this territory. The well is located 3 miles southeast of Urania, in the northwest corner of Section 27, Township 10, Range 2 east, 52 miles south of Monroe and 45 miles north of Alexandria.

It blew in at 1,445 feet while drilling was in progress, with an initial production estimated at 50,000,000 feet, blowing the 10-inch casing out of the hole and forming a crater under the derrick floor which at last account was 7 or 8 feet in diameter and had caused the derrick to topple to the ground.

Twice the well has stopped flowing and opinions are divided as to whether it mudded itself off or is merely a gas pocket, but it is generally agreed that the size of the well, the quality of the gas and the fact that the Urania Petroleum Co., an English syndicate, got a showing of oil in a test 2 miles south of Urania and 2 miles west of the big gasser are promising indications of a probable oil and gas field in this territory.

The well was drilled by Fred Stovall of the Stovall Drilling Co., one of the best known drilling contractors in northeastern Louisianan, who owns some 1,200 acres of leases in the vicinity of the well. Practically all the acreage in this territory is owned by large lumber companies in the East, few if any, of whom have local representatives, and it is probable that considerable time will lapse before there will be much trading in leases in the vicinity of the new well.

Mr. Stovall, who probably has more rigs running than any other single operator in the Monroe territory, has established an unique method of making his rounds through the fields. He drives a roadster to which he has attached a trailer. On the trailer, rides his trusty saddle horse. He goes as far as he can in the car, then faithful Dobbin comes to the rescue, carries him over to the well and back, where Dobbin again mounts his chariot and the Dodge resumes its trail.

SALIENT FEATURES OF NATURAL GAS SITUATION AS SEEN BY S. S. WYER

The Oil and Gas Journal has received an interesting pamphlet by Samuel S. Wyer, authority on natural gas questions, entitled, "Salient Features of Natural Gas Situation at Columbus, Ohio." It says in part:

"The natural gas used in Columbus comes from a pipe line system that receives one-fourth of its gas in interstate commerce from West Virginia and the balance from Ohio. Ohio has about 1,000 000 domestic natural gas consumers and these represent about 39 per cent of all the natural gas consumers in the United States. There are over 500 natural gas-using towns in Ohio and more than 75 per cent of the State's population depends on natural gas. The consumers in Columbus represent about 8 per cent of the State's total.

"The demand for natural gas is now greater than the available supply. Since the volume cannot be increased, the amount of gas available for each consumer will be less each year. In 1916 the natural gas consumed in Ohio was 169,000,000 000 feet. The amount in 1922 was 103,000,000,000 feet. The maximum annual production in West Virginia was 308,000 000,000 feet in 1917; this dropped to 195,000,000,000 feet in 1922. In Columbus, the total domestic natural gas consumed in 1917 was 10,-200,000,000 feet. In 1923, with many more consumers, the domestic supply was only 8,300,000,000 feet."

The average price of manufactured gas for the entire United States is $1.25 per 1 000 feet, Mr. Wyer shows. The same amount of natural gas would, therefore, represent a value of $2 50. The present natural gas rate in Columbus is about 20 per cent of the cost of the nearest competing commodity, he shows:

The average open flow capacity of new wells declined:

In Ohio, from 4 000,000 feet in 1911 to 1,129 000 feet in 1923.

In West Virginia, from 7,000,000 feet in 1903 to 1,700,000 feet in 1922.

The average annual production per gas well declined:

In Ohio from 16 000.000 feet in 1911 to 9 000 000 feet in 1923.

In West Virginia, from 82.000 000 feet in 1910, to 48 000.000 feet in 1922.

There has been a marked decline in rock pressure in both West Virginia and Ohio, necessitating a marked increase in compressor capacity in order to get the gas to market.

The average purchase price of natural gas at the well increased:

In Ohio from 1909 to 1923, 114 per cent.

In West Virginia, from 1917 to 1922, 70 per cent.

The average consumer uses much more gas than is necessary and could easily get the same service with one-half the volume. If correct use methods were intensively applied, each customer could make one foot of gas do the work where three are now misused.

The use of efficient appliances will so curtail the volume of gas needed that the domestic consumer can pay the higher price per unit necessary to induce persistent hunting for new supplies, and secure the most efficient removal of the residue supply of natural gas without increasing his annual bill.

The total annual gas bill of the average Columbus natural gas consumer is now under $53.00 a year, or less than 15 cents a day.

"Man consumers are carried at a loss," he continued. "When such carrying costs are not paid by the consumer for whom they are incurred, they must, therefore, be carried by other consumers and thus produce discrimination. About one-half of the natural gas consumers in Columbus average less than 5,000 feet of gas per month. About 12 per cent use practically nothing and the cost of maintaining the unused capacity that these customers insist on having available, but which they do not utilize, is carried by

(Continued on Page 80)

LOUISVILLE GAS CO. MAY ADOPT NEW RATE

BARTLESVILLE, Okla., April 21.—A. W. Lee, assistant to the vice president, Louisville Gas & Electric Co., Louisville, Ky., has been visiting Empire gas division properties to study the functioning of the three-part rate, and other operating problems. After investigating the operation at Ottawa, Kans., Mr. Lee was convinced, he said, that the rate offered the only solution of the gas service problem at Louisville.

"Our company and the city officials are determined to adjust rates to assure efficient gas service, and do away with periodic rate adjustments," he said. "The experience of Ottawa attracted our attention, and my company desired a personal investigation and report."

Mr. Lee took great interest in the electric welding machine in operation at the Tallant compressor station where metal parts of much machinery are being reclaimed. If the rate is adopted for Louisville, it is the plan to adopt it for all this company's gas properties.

NEW GATHERING LINE

BARTLESVILLE, Okla., April 21.—The Empire Pipe Line Co., a subsidiary of the Empire companies, Bartlesville, is starting the construction work on a new gathering system, in the Greenwood County, Kansas, field, which is designed to take oil from the various leases in a large number of the pools of this field by gravity.

The gravity gathering system program calls for the construction of a substantial oil pumping station in the vicinity of 9-23 11, Greenwood County, together with necessary receiving tanks, and a number of cottages for employes. On the leases of Greenwood County field, which will not be served by this gravity gathering system, the installation of motor-driven power pumps is planned.

The increased amount of oil which is being handled by the Empire Pipe Line Co. and additional business expected due to future development in the Greenwood County territory, is the reason for the installation of the new gathering system.

COTTON VALLEY CARBON PLANT

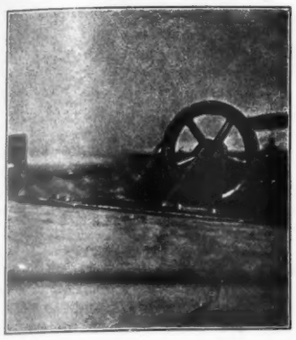
SHREVEPORT, La., April 19.—The Louisiana Oil Refining Corp. is making a preliminary survey of the Cotton Valley gas field with a view to the establishment of a carbon plant in that district. The Louisiana came into possession of the discovery oil well in this territory under the terms of the drilling contract by which the well reverted to them should it come in an oil well.

WOULD USE MONROE GAS

SHREVEPORT, La., April 21.—Columbia, La., in Caldwell Parish, is soon to have a gas supply from the Monroe Field. A mass meeting has been called to decide whether to finance the project by a bond issue or through private interests. Columbia is 25 miles south of Monroe and only a small stretch of pipe will be required as it lies not far off the main line which runs from the Monroe Field to Alexandria.

CITY CLOSES GAS DEAL

LONG BEACH, Cal., 19.—The city of Long Beach has closed a deal with the Southern Counties Gas Co. for purchase of $80.000 worth of pipe to be laid from Signal Hill Field to the Edison plant in the harbor. Work has been started on laying the line. The $80.000 is to be applied to the purchase of the Southern Counties properties by the city.

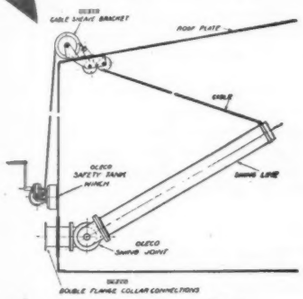


OCECO Cable Sheave Bracket

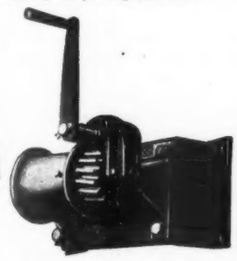
Entire cable load and pull centered directly on angle iron connection.

True alignment of cable passing over and between guide sheaves through stuffing box.

Completely assembled unit ready for immediate attachment to top iron of tank.



Cross Section of Tank—Equipped with OCECO Swing Line Equipment.



OCECO Safety Tank Winch

Prevents dropping of swing line, when operated, because device is driven by worm gears.

Winch drum locks upon removal of handle forestalling any tampering.

Costs even less than old-fashioned pinion driven winches. Made in three sizes to fill all needs.

Your Pumpers Will Say "Yes" to This

You know when it used to be necessary to climb to the roof to raise or lower the swing line.

And that old windlass housing—how it was almost always left open letting the oil (really gasoline) evaporate, and inviting fire.

That was before the days of OCECO Swing Line Equipment. How different today! The swing line is handled by the pumper operating the safety tank winch **from the ground**—no climbing. And the cable sheave bracket is gas-tight—**no evaporation.**

Everywhere, for hundreds of companies, OCECO Swing Line Equipment is saving pumpers' time, lowering operating costs and cutting down insurance premiums. These companies find that OCECO pays for itself in a year or so and after that yields a net profit every year.

The OCECO Swing Pipe Equipment booklet will be gladly sent to you upon request.

THE OIL CONSERVATION ENGINEERING COMPANY

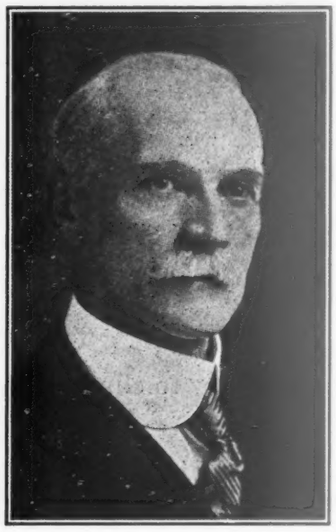
Manufacturers of fire-prevention and evaporation-prevention equipment for tanks

Addison Road & N. Y. C. Tracks **Cleveland, Ohio**

Cunard Bldg. (25 Broadway) New York City
Monadnock Bldg., Chicago, Ill.
2024 Railway Exchange Bldg., St. Louis, Mo.
220 Iowa Bldg., Tulsa, Okla.
Texas Nat'l. Bank Bldg., Fort Worth, Texas
401-403 Perlstein Bldg., Beaumont, Tex.
O-S Bldg., Casper, Wyo.
318 E. 12th St., Los Angeles, Cal.
440 Howard St., San Francisco, Cal.
Beaumont Export & Import Co. Distributors
Tampico—Mexico City—Monterrey Republic of Mexico

OCECO

MEN KNOWN IN OILDOM



S. R. Parsons

S. R. Parsons, who has been president of the British-American Oil Company of Toronto, Ont., since its inception, is one of the outstanding figures in the refining industry in Canada. Mr. Parsons was born at Port Hope, Ont., August 4, 1854. Educated at Port Hope Grammar school, as a young man he went to Winnipeg, Manitoba, where he engaged in the wholesale stationery business as senior partner of the firm Parsons, Bell & Company, later merged with the Consolidated Stationery Company, Ltd., of which he was president for some years.

In 1906 he returned to eastern Canada, to found the British-American Oil Company. The company has a refining plant at Toronto, with distributing branches throughout Ontario, Quebec and the Canadian West. The western expansion, through the taking over of the Continental Oil Company of Winnipeg, took place a few years ago. Mr. Parsons has been prominent in public affairs for many years. He has been chairman of the Ontario board of directors of the Canadian Fire Insurance Company since 1900; a member of the Northern Ontario Fire Relief Committee; a member of the Organization of Resources Committee for Ontario, and a member of the Canadian Industrial Reconstruction Association. He has long been prominent in the Canadian Manufacturers' Association, being chairman of the transportation committee from 1911 to 1915; second vice president of the association in 1915, first vice president in 1916 and president in 1917.

PERSONAL PARAGRAPHS

Archibald W. Brown, representative of John A. Roebling's Sons Company, Trenton, New Jersey, is in Tulsa on business.

* * *

B. H. Carnahan, of the Denver office of the United States Bureau of Mines, spent several days in Casper, Wyo., recently.

* * *

A. C. Reimer, traffic manager of the General American Tank Car Company, Chicago, spent several days in Shreveport, La., on business for his company.

* * *

C. E. Loane, Sr., of Oil City, Pa., was the guest of his son, Capt. C. E. Loane, Jr., in Pittsburgh, during the early part of last week. Mr. Loane, Sr., was for a great many years associated with the Standard Oil Company and its subsidiaries and is now on the retired list.

G. A. Montgomery of the Titusville Iron Works, Titusville, Pa., is making Tulsa his headquarters while on a trip throughout the Mid-Continent.

* * *

Walter Stalder, a consulting geologist, with headquarters in San Francisco, was in Los Angeles during the early part of last week on a business trip.

* * *

H. L. Hileman, assistant sales manager for the Joseph Reid Gas Engine Company of Oil City, Pa., was in Shreveport, La., last week visiting the local office.

* * *

E. J. Harris of the right-of-way department of the Eureka Pipe Line Company with headquarters at Mannington, W. Va., visited Pittsburgh, Pa., recently.

* * *

W. R. McMahan, field representative of the Prairie Oil and Gas Company, El Dorado, Kans., was visiting the Tulsa office of the company recently.

* * *

J. L. Shakely, sales manager of the Frick-Reid Supply Company, Tulsa, has returned from a business trip to St. Louis, Kansas City, and points in Kansas.

* * *

K. C. Heald, of the Washington offices of the United States Bureau of Mines, made a hurried trip from that place to Casper, Wyo., recently on official business.

* * *

T. W. White and N. P. McGrathey, vice presidents of the Sinclair Refining Company, were in New Orleans recently, coming from the New York headquarters.

* * *

I. D. Stewart and James R. Gettemy of the Marland Oil Company of Colorado, were in Casper, Wyo., recently from the Denver headquarters of the concern.

* * *

A. B. Patterson, general superintendent, A. R. Wilson and J. T. Rankin, of the Denver office of the Texas Production Company, were in Casper, Wyo., recently.

* * *

Judge C. D. Chamberlin, secretary and general counsel of the National Petroleum association, is recovering at his home in Cleveland, Ohio, from a severe illness.

* * *

I. N. Bettison, one of the oldest drilling contractors in Texas in point of service, now located in San Antonio, was a visitor to the Coastal pools during the past week.

* * *

E. F. Hannon of Fort Worth, Tex., president of the Cartaret Oil Corporation, is in New York City on business for his company. He will be away for a week or ten days.

* * *

A. T. Schwennesen, for several years a geologist with the Shell Company of California has been transferred to the Rocky Mountain district with headquarters in Denver.

* * *

W. W. Fondren, of Houston, vice president of the Humble Oil Company, in charge of its production in the Shreveport, La., district, spent a few days in Shreveport last week.

* * *

Levi Smith of Pittsburgh, Pa., president of the Big Lake Oil Company, is in Reagan County, Texas, superintending the completion of several tests that should reach production depths soon.

* * *

T. J. Meager, secretary of the Pennok Oil Company, New York City, together with Mrs. Megear, has been spending several days inspecting the Mid-Continent properties of the company.

* * *

George Gleason, president of the Central Texas Petroleum Company of Fort Worth, Tex., has returned from a month's business trip, which extended to nearly all of the larger eastern cities.

* * *

Christy Payne, of New York, president of the Hope Natural Gas Company, subsidiary of the Standard Oil Company of New Jersey, visited the home office of the company in Pittsburgh last week.

W. L. Kistler, president of the Producers & Refiners Corporation, has returned to the Tulsa offices of the company after testifying before the senatorial investigating committee at Washington, D. C.

* * *

L. P. St. Clair has been re-elected president of the Independent Oil Producers Agency at the recent annual session in Bakersfield, Cal. S. W. Morshead was re-elected vice president and W. B. Robb was re-elected secretary and treasurer.

* * *

Nelson K. Moody, president, and Dana H. Kelsey, vice president and general manager of the Prairie Oil and Gas Company, of Independence, Kans., spent several days in the Tulsa offices of the company recently.

* * *

Harry M. Byers, formerly with the Oil Well Supply Company, with Tulsa as headquarters, has joined the Lufkin Foundry and Machine Co., Lufkin, Tex., and will direct the work of the rotary drilling equipment department.

* * *

A. J. Powers, western representative of the National Tube Company, of Pittsburgh, Pa., with headquarters at Colorado Springs, Colo., is in Casper, Wyo., looking after the business of his firm in the nearby fields. Mr. Powers gives much attention to line pipe and casing for the fields and boiler tubes.

* * *

Commander H. A. Stuart has been appointed as resident agent in Wyoming for Admiral Strauss, receiver of Teapot Dome. Commander Stuart will make Casper his headquarters and he has secured a residence and has moved his family to Casper from Washington, D. C.

* * *

M. V. McQuigg, with his two sons, Frank and Harry, has opened an office in the Hollingsworth Building, Los Angeles, and is planning some new ventures. He still has some extensive interest in oil in California and elsewhere although not at present officially connected with any company.

* * *

P. A. Conway, commerce counsel of Western Petroleum Refiners' Association, attended the hearings before the Southern Ports Foreign Freight Committee at Chicago, April 22, to present the association's protest concerning the threatened abolishment of export rates for petroleum products and subsituting domestic rates.

* * *

Mayor O. P. Callahan, of Ponca City, Okla., was elected president of the Mid-State Petroleum Company. Mr. Callahan resigned the treasureship of the Kay County Gas Company, Alcorn Oil Company and other subsidiaries of the Marland Oil Company. The Mid State Petroleum Company has leases in Oklahoma, Kansas and Texas.

* * *

"Big Bill" McKinley, former University of Oklahoma football star and for past two years coach of the Lawton football and track teams, has resigned from the Lawton high school, to join the geological staff of Marland Oil Company, of Ponca City, Okla. Mr. McKinley has left for Dallas, Tex., and from there will go to Old Mexico for the Marland interests.

* * *

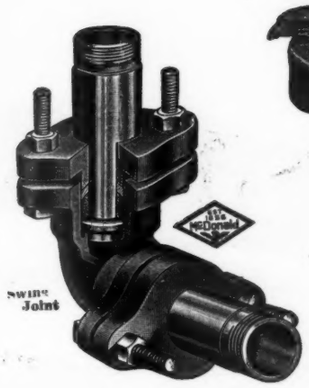
A. M. Johnson, general manager of the Petroleum Iron Works Company's interests in the Southwest, has returned to Houston, Tex., from a trip East, including a visit to the plant at Sharon, Pa. His company is erecting 24 steel tanks for the Houston Oil Company at its topping plant in Arkansas, which it is building to handle Smackover crude. The refinery will be in charge of Fred Smith, long connected with The Texas Company at Port Arthur, La., and the Galena-Signal Company's plant at Houston, Tex.

* * *

W. R. Cowan, formerly with the Union Oil Company of California and later executive vice president of the Julian Petroleum Corporation, has severed his connections with the latter concern in order to take charge of the Cowan Oil & Refining Company. Mr. Cowan, together with Fred H. Hamilton, Roscoe W. Stephens and Charles E. Reed, organized this company several weeks ago to engage principally in the casinghead business. The company's first plant will be erected at Domingues, Cal., to take care of gas from the Union and Shell Oil companies' wells in this field.

McDONALD

For Gas-Tight Loading of Casinghead Gasoline



Swing Joint

Tank Vent

Leaders In Our Field

"The Home of the Swing Joint"

The A. Y. McDonald Mfg. Co. is the world's largest maker of swing joints, as well as one of the largest makers of other oil handling equipment.

Look over the more modern loading racks in any refining section. You will note that McDONALD Swing Joints predominate strongly. The reasons lie within the product itself. Design is simple and sturdy. Materials and workmanship are unsurpassed. Packing is the result of years of study and development. These joints remain tight in service 7 and 8 years without repacking.

McDONALD DUPLEX TANK VENTS, for relieving internal and external pressures on storage tanks, are used throughout the world and are accepted as the standard of value.

Our UNIVERSAL GASTITE DOME COVER, for preventing evaporation losses while loading casinghead or absorption gasoline, is meeting with wide favor. This cover also effects a saving in loading ordinary gasoline.

These are only a few of the interesting items in the complete McDONALD line. Allow us to send you our Oil Equipment Catalog.

A. Y. McDONALD MFG. CO.

Dubuque, Ia.

Branches: Omaha Minneapolis Des Moines

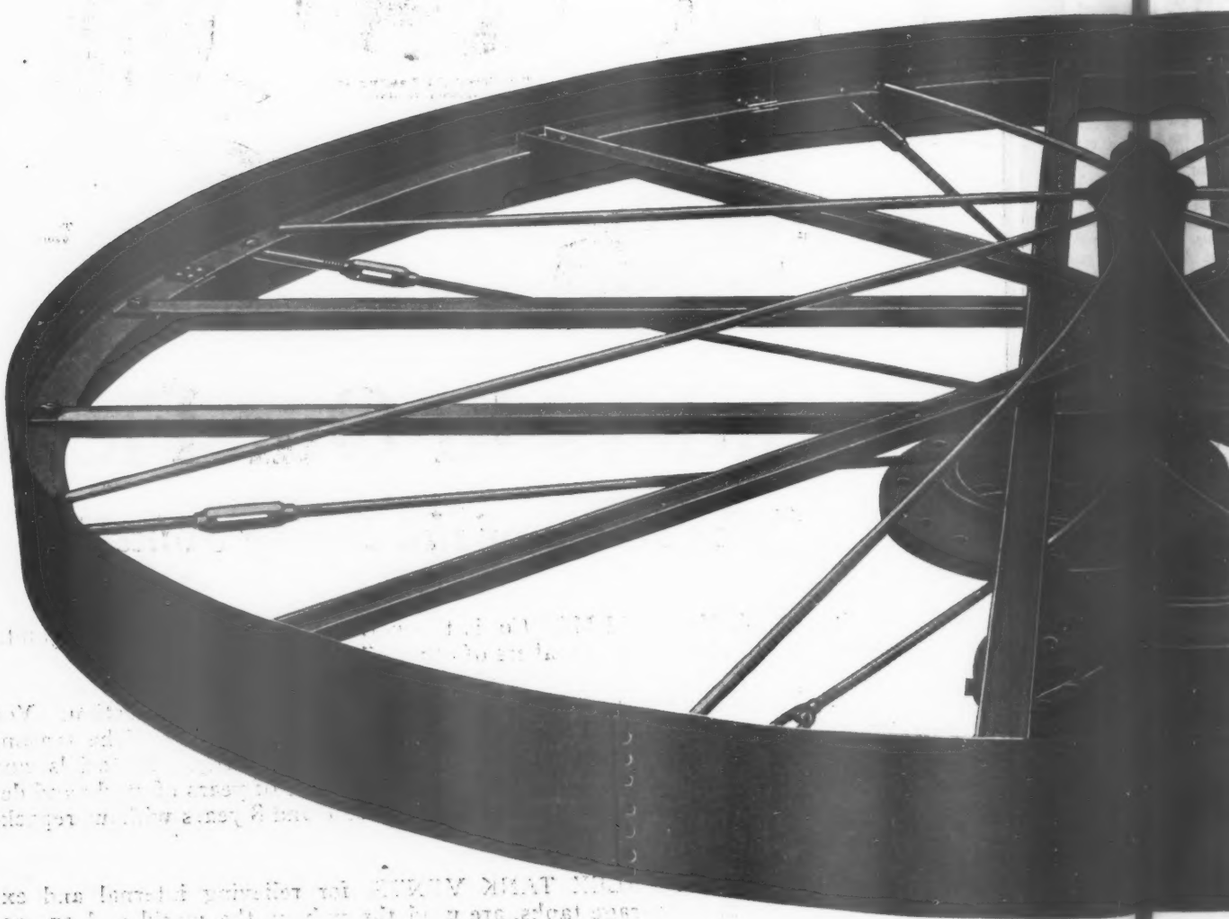
Complete stocks also carried by Butler Mfg. Co., Kansas City, Mo.; Sharpsville Boiler Works Co., Sharpsville, Pa.

138

EST. 1888 McDonald

"The PIONEERS in Offering Complete Bulk Station Equipment"

No. 12C National P

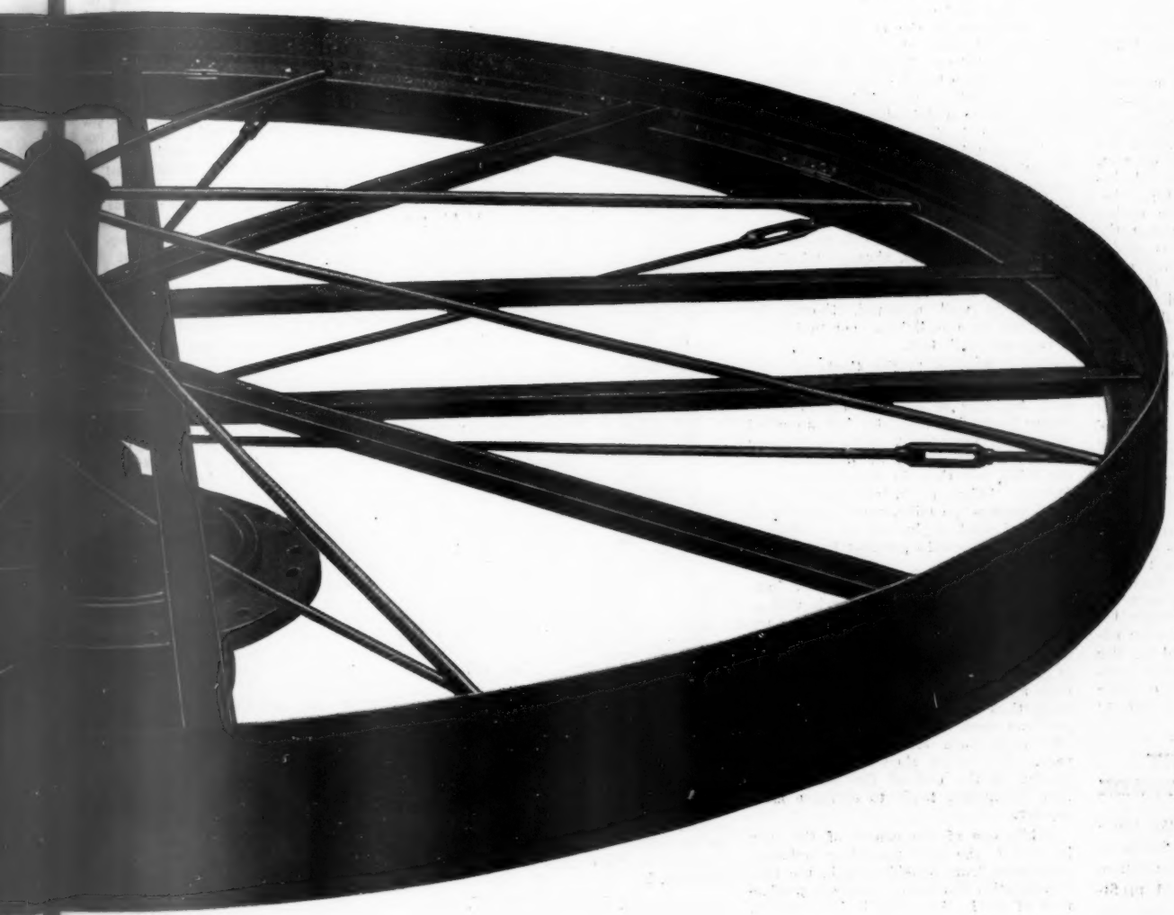


The Perfectly Lbr

NSCO

THE NATIONAL SPR

PUMPING POWER



Lubricated Power

SUPPLY COMPANIES

NSCO

EQUIPMENT AND SUPPLIES

VACUUM IS FEATURE OF NEW OIL BURNER

Vacuum is utilized to advantage in the new Gould "Inferno" oil burner, described in a recent bulletin sent out by the Gould Burner Co., Shreveport, La. "The rush of live steam or compressed air through the Gould 'Inferno' oil burner creates a vacuum in the large central chamber," the bulletin says. "This vacuum draws in air from one side and oil from the other. The air and oil unites with a swirling motion, and one instant later are shot from the burner, perfectly vaporized.

"The fuel being mixed with approximately the right amount of air for perfect combustion, the ignition takes place within from 2 to 6 inches of the end of the burner. It is never necessary or even possible for the fuel from a Gould 'Inferno' Oil Burner to strike the target before complete ignition takes place. Owing to this fact it is possible to mount the burner in the rear of the fire box, under the mud rim and near the blowoff cock, pointed toward the inside of the fire door, with the target removed. When used in this manner the speed of the heat through the boiler is considerably retarded and the stack temperature reduced. The economy of this method is evident.

"Much less steam or compressed air is required to operate the Gould 'Inferno' oil burner than is required for burners that admit no primary air. By primary air is meant air mixed with the fuel before it leaves the burner. This is evident as the volume of steam or compressed air necessary to operate the Gould 'Inferno' oil burner is supplemented with primary air from the atmosphere. In practice this may be demonstrated by turning the primary air valve off at which time the burner becomes much like an ordinary burner admitting only steam and fuel and the fire will become a dull red with much soot. Only by admitting more steam or compressed air can the fire be cleared up even slightly."

ON MOTOR EQUIPMENT FOR WAREHOUSE TRADE

For the purpose of giving the warehouse trade information, which has been collected during a year of investigation, concerning the maintenance and profitable operation of motor equipment, the General Motors Truck Co., Pontiac, Mich., has prepared a new booklet, "Warehouse Transportation," for free distribution to warehousemen.

The booklet contains data on the tractor-truck and trailer system of transportation, selection of bodies, capacity weight tables, operating costs, a base rate table for local and long distance hauling, Federal and State legislation, and truck specifications.

It discusses these problems from the viewpoints of companies engaged in local and long distance moving of household goods, the furniture warehouseman, the general merchandise warehouseman, and the warehouse handling all classes of storage.

NEW STORE AT HOMINY

The Pawhuska store of the Continental Supply Co. has been closed and a new store has been built at Hominy, Okla. Grant Phillips, formerly manager of the Pawhuska store, has been moved to Hominy and placed in charge there. A complete stock has been installed at Hominy.

PIPE MILL PRODUCTS STRONGEST; OTHER STEEL MARKET PRICES YIELD

By B. E. V. Luty

PITTSBURGH, Pa., April 21.—The steel trade has been losing ground very rapidly in the past fortnight and indeed since the first of the month. While buying of steel decreased somewhat in the second half of February and during March there was merely a slight tapering off, not enough to have much influence either upon mill operations or upon general sentiment in the trade. Since the beginning of April the change has been a very decided one. Buying of steel products as a whole has dropped to relatively small proportions, though in some lines there remains a fair degree of activity. Everywhere it is recognized that the steel market is in distinctly poor shape. Prices continue to show a yielding tendency, taking the market as a whole, but in the past week there have been less important developments in the past week than were noted in this report of a week ago, when bars, shapes and plates had declined to an openly quoted price of 2.30c. This figure has since been moderately well observed, though inquiry has been so light as not to furnish a very thorough test.

Decline 10 Per Cent

Some mills were so lightly supplied with backlogs of business that the decrease in buying promptly had an effect upon their operations, and several large plants are producing at one-fourth to one-third less than in the fore part of March. Other mills, and particularly steel corporation mills, were better fortified, and steel production as a whole is down only about 10 per cent from its recent peak.

The monthly steel ingot report indicates that production in March was at a rate of about 49,600,000 gross tons per annum. Production was slightly heavier in the fore part than in the latter part of the month, so that a rate of 50,000,000 tons a year no doubt prevailed for a time, thus making a new record. The previous record was a rate slightly above 49,000,000 tons, late in April of last year. Production then decreased quite slowly, to the end of the year. This time production tends to decrease more rapidly.

While one of the causes of the turn in steel is the very unsettling influence proceeding from Washington in the past two months, another cause is overproduction of steel. Capacity is in excess of requirements, but production very nearly reached the capacity rate. While stocks of steel in buyers' hands may not be large there is occasion for some liquidation now that buyers have become so conservative.

Pipe Production Steadiest

Probably the strongest and steadiest finished steel line, outside of rails, is pipe mills products, including ordinary merchant pipe and oil country goods. The pipe mills have been operating substantially at capacity since early in the year, yet have accumulated no stocks of any consequence, while distributors seem to be merely comfortably stocked. Even in pipe, however, it is doubtful whether there will be enough buying demand in the next few months to sustain capacity operations, for the reason that there is not the usual demand for line pipe. Some business has been under negotiation, but the tonnages do not compare with those of this time a year ago.

Prices of merchant pipe and oil country goods are firmly maintained and do not seem to be under any pressure. Sheets are being shaded still more and there is some irregularity in prices of wire products.

Pig iron is very dull, if not stagnant, in all districts, and prices are soft. In some districts not enough business has been done to show where prices really stand. There is practically no coke market at all.

SPRING CASING HOOK AND DRILL PIPE SLIP

The Titusville Forge Co. is introducing a specialty invented and patented by J. A. Montgomery, manager of the company's oil tool department. The Montgomery spring casing hook is said to be the most highly perfected spring hook yet developed. Spring casing hooks serve two purposes: They reduce strains on rig and equipment by cushioning any jerks, and they automatically lift the casing out of the collar the instant the threads are disengaged, when unscrewing, thus preventing damage to threads.

The Montgomery is offered as an "all-purpose" hook. It attaches direct to the casing block bail, so that no "c" hook is required, and is instantly convertible from (1) a double-swiveling spring hook, to (2) a non-swiveling spring hook, or (3) a non-rotating rigid hook.

Mechanically it is highly perfected, swiveling with utmost freedom on cone bearings which, with its spring, are housed in a completely enclosed chamber partly filled with oil. This chamber is so packed as to retain oil indefinitely and render the entire mechanism dustproof. The hook has a safety latch and is gracefully designed, with no projections to entangle lines or knock off tubing boards.

HISTORY OF PETROLEUM IN UNUSUAL BOOKLET

A most unusual publication is the Tide Water Oil Sales Corp.'s attractive booklet, "An Unusual History of Petroleum." The subject matter is treated in a clever manner and the world history of petroleum is brought out in very entertaining fashion. The art work is above the average and in every way the publication is attractive and informative.

The general topics are as follows: Ten million years ago, one million years ago, ten thousand years ago, five thousand years ago, four thousand years ago, three thousand years ago, two thousand years ago, one thousand years ago, one hundred years ago, sixty-five years ago, forty-five years ago, and today. In each article the place of petroleum in each particular period of history is described.

On opposite pages, facing the general stories are entertaining sketches pointing out the advantages of the Tide Water products. In each of these sketches a mythical personage, "Bill," has a little tale to tell and some technical feature of the Tide Water organization and plant is described briefly but completely.

MULTI-UNIT TANK CAR FORMALLY APPROVED

The Mathieson multi-unit chlorine gas tank car, designed and operated by the Mathieson Alkali Works, Inc., is held entitled to the same freight rates and privileges as any tank car, by decision of the Interstate Commerce Commission, which completely upholds the contentions of the Mathieson Co. and the "Safety First" principles embodied in this car design. The multi-unit car assures full compliance with the law by cleansing and accuracy in loading, and greatly increases the safety factor in handling and transportation by separating the units into 15 containers carrying exactly 2,000 pounds each, compared to a single unit chlorine tank car which carries 15 tons in a single tank. The requirements that containers carrying chlorine must be loaded on accurate scales, and approved plant practice of thorough cleaning and inspection of each container at the manufacturers works is, with certainty, observed by this type of equipment. The reduction of the hazard is also an important factor. The consumer is assured of getting exactly 2,000 pounds of liquid chlorine in each container.

When the Mathieson Co. voluntarily went to the expense of designing and placing in service this multi-unit car over two years ago, the railroads held it was not a tank car, and attempted to assess charges far in excess of those applying on the Class V tank car, ignoring the advantages to themselves, their employes, and the public at large from a "Safety First" standpoint. In the interest of both producer and consumer, the Mathieson Company appealed to the Interstate Commerce Commission that this discrimination be removed, that the industry might be able, economically, to use this equipment. While this case was pending, the Mathieson Co. assumed the excess freight charges on every movement, in many cases three times the charges on a single-unit tank car.

By this favorable decision, the Mathieson Alkali Works has been upheld by the Interstate Commerce Commission, which body is responsible for the public safety in the transportation of any hazardous article. All large chlorine consumers such as the pulp and paper industry will materially benefit in their ability to secure, in a safe, economical and convenient manner, one of their most important raw materials.

DEVICES TO CONTROL HIGH PRESSURE WELLS

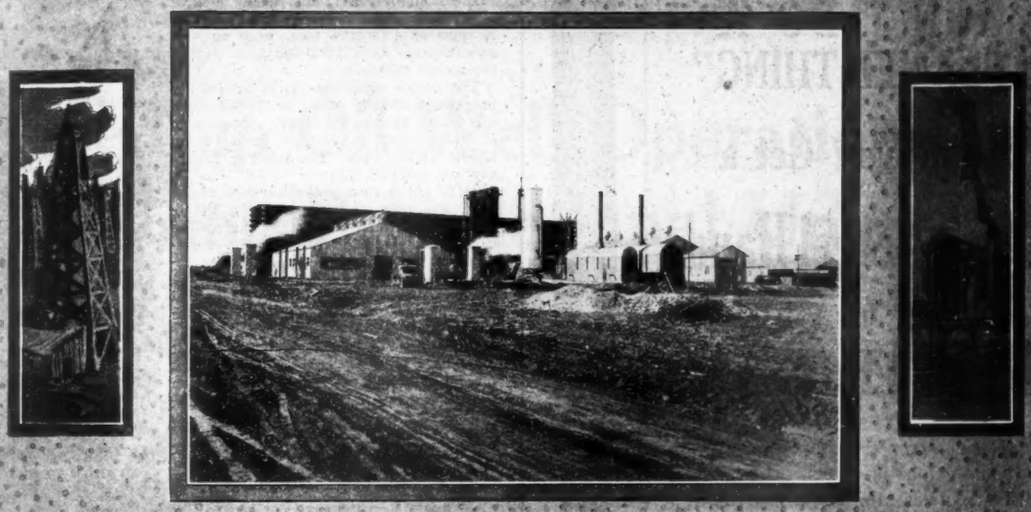
The Oil Well Improvements Co. has a catalog coming off the press that is more than a catalog. It is an authoritative work on the devices used to control oil and gas in wells of high pressure, both during drilling operations and after the well is brought in.

The Oil Well Improvements Co. is well able to put out a book of this kind. Its mature experience with its Control Casing Head and Roller Oil Saver has given it ample opportunity for extensive study. These devices, which have saved enormous amounts of both oil and gas from wastage, as well as the destruction of much lease property by fire, are fully described in the book.

TO OPEN OKEMAH STORE

The Oil Well Supply Co. is opening a new supply store at Okemah, Okla., and supplies are being moved in. E. W. Edwards, formerly with the company's Okmulgee store, is in charge of the new store.

"If Continental sells it there is no better"



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The First "DON'T" In Fishing Jobs

"DON'T DO A BLAMED THING"

Until You Get a

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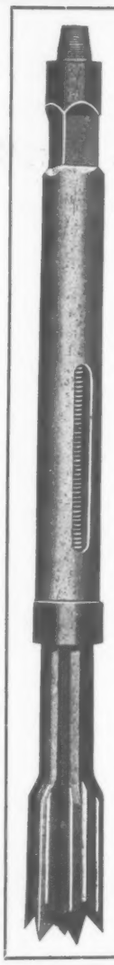
or

Devil's Pitchfork



Report after report comes to us of fishing jobs on which other tools have worked for weeks without success, that have yielded in just a few hours to the Devil's Pitchfork or Devil's Steel Hand. In many cases the job has been made considerably more difficult because the unsuccessful tool had been used.

Think of the saving that would have been effected on these jobs, had a Devil's Steel Hand or Devil's Pitchfork been used FIRST instead of LAST.

Using special tools for each different fishing job is not only expensive in rentals but often many hours are spent waiting for a special tool only to find when it arrives that it is the wrong one for the job or that some unforeseen complication prevents it from being successful.

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Their cost is nominal, their service extraordinary. Write for descriptive folder and prices.

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WATER SHIPMENTS FROM GULF PORTS IN MONTH OF MARCH SHOW INCREASE

HOUSTON, Texas, April 19.—The movement of refinery products and crude through the Gulf ports totals 10,639,150 bbls. during March, an increase of 2,201,047 bbls. over the February figures. Refinery products total 6,513,036 bbls., or 911,595 bbls. more than during February, but the large increase was in crude. A total of 4,126,114 bbls. were shipped as compared with 2,836,662 bbls. during the month previous.

The export consignments of refined aggregates 1,138,572 bbls., or 72,661 bbls. less than during February. One cargo of crude sent to foreign ports, being merely 70,734 bbls. The total in February was 349,978 bbls.

It is noted that the shipments of refined are running approximately 1,000,000 bbls. per month less than during the early part of 1923 and that the movement of crude to Atlantic coastwise refineries is heavier.

The export shipments have decreased very materially when compared with 1923.

The Port Arthur-Beaumont district furnished 7,496,547 bbls. of the total for March and the Texas City-Houston Ship Channel refineries loaded out 2,609,043 bbls. The South Louisiana districts 533,560 bbls.

The following table shows the shipments by each company in detail:

FROM PORT ARTHUR

Refined
By The Texas Co.

Coastwise	977,629
Export	445,784
Total	1,423,413

Crude

Coastwise	312,425

By Gulf Refining Co.
Refined

Coastwise	2,182,982
Export	452,655
Total	2,635,637

Crude

Coastwise	66,169

By Magnolia Petroleum Co.
Refined

Coastwise	1,268,126

Includes 194,257 bbls. of fuel oil.

Crude

Coastwise	318,878

FROM SABINE PASS

By Sun Co.
Crude

Coastwise	291,236

FROM NECHES TERMINAL, Orange Co.

By Humble Oil & Refining Co.
Crude

Coastwise	109,563

FROM PORT ARTHUR

By Atlantic Oil Prod. Co. (Atlantic Ref. Co.)
Crude

Coastwise	698,800

FROM SMITH'S BLUFF

By Pure Oil Co.
Refined

Coastwise	83,300

Crude

Coastwise	289,000

FROM TEXAS CITY
By Vacuum Oil
Crude

Coastwise	151,900

By Humble Oil & Ref. Co.
Crude

Coastwise	1,170,193
Export	70,734
Total	1,240,927

FROM BAYTOWN

By Humble Oil & Ref. Co.
Refined

Coastwise	439,000

Crude

Coastwise	468,617

FROM SINCO (Sinclair Terminals)

Crude

Coastwise	178,599

FROM HOUSTON

By Galena-Signal Oil of Texas
Refined

Coastwise	60,000
Export	45,000
Total	105,000

By Deepwater Ref. Co.
Refined

Export	25,000

FROM BATON ROUGE (Refinery)

By Standard Oil of Louisiana
Refined

Coastwise	363,427
Export	170,133
Total	533,560

SUMMARY

Shipments by Water of Refined and Crude from Gulf Ports During March, 1924

Company and port—	Refined	Crude	Total
The Texas Co., Port Arthur	1,423,413	312,425	1,735,838
Gulf Refining Co., Port Arthur	2,635,637	66,169	2,701,806
Magnolia Petroleum Co., Beaumont	1,268,126	318,878	1,587,004
The Sun Co., Sabine Pass	.....	291,236	291,236
Humble Oil and Refining, Neches Term.	.....	109,563	109,563
Atlantic Oil Producing, Port Arthur	.....	698,800	698,800
Pure Oil Co., Smiths Bluff	83,300	289,000	372,300
Vacuum Oil, Texas City	.....	151,900	151,900
Humble Oil & Refining, Texas City	.....	1,240,927	1,240,927
Humble Oil & Refining, Baytown	439,000	468,617	907,617
Humble Oil & Refining, Sinco	.....	178,599	178,599
Galena-Signal, Houston	105,000	.....	105,000
Deepwater Ref., Houston	25,000	.....	25,000
Standard of Louisiana, Baton Rouge	533,560	.....	533,560
Total for March	6,513,036	4,126,114	10,639,150
Total for February	5,601,441	2,836,662	8,438,103
Difference	911,595	1,289,452	2,201,047

EXPORTS FROM GULF PORTS DURING MARCH, 1924

Company and port—	Refined	Crude	Total
The Texas Co., Port Arthur	445,784	.....	445,784
Gulf Refining Co., Port Arthur	452,655	.....	452,655
Humble Oil and Refining Co., Texas City	.....	70,734	70,734
Galena-Signal, Houston	45,000	.....	45,000
Deepwater Refining Co., Houston	25,000	.....	25,000
Standard of Louisiana, Baton Rouge	170,133	.....	170,133
Total for March	1,138,572	70,734	1,209,306
Total for February	1,211,333	349,978	1,561,311
Difference	72,761	279,244	352,005

RUSSIANS STUDYING LOS ANGELES FIELDS

LOS ANGELES, Cal., April 19.—An intensive study of American drilling methods and especially those in use in southern California, is being made by B. M. Sajin and A. H. Pavloff, engineering experts of Moscow, who were visitors during the past week. An incident of their visit involved the purchase of equipment for use in the Russian fields.

"We have rich oil fields in Russia near the Caspain Sea and also in the north," said Mr. Sajin, "but our methods are antiquated, no improvements having been made since the war. We still drill wells by means of the old cable system instead of using electric rotary drills as you do here. We are negotiating for the purchase of a considerable amount of equipment of the latest type to be installed in our fields. Our government has decided to develop our oil resources on a large scale."

TO DEEPEN WAURIKA TEST

WAURIKA, Okla., April 21.—T. T. Eason, of Enid, general manager of the Healdton Oil & Refining Co., announces his company and the Marland Refining Co. will resume drilling soon in a test temporarily abandoned in Section 22-3-6, northeast of Waurika. The hole is 3,000 feet deep. It will be drilled to 3,500 feet or deeper. Gas was found at about 1,200 feet and 1,500 feet.

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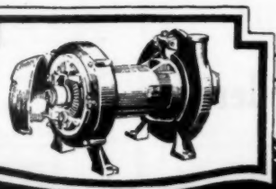

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Warren, Ohio

GULF COAST

(Continued from Page 66)

lahan and others' No. 1 Wiseman in the western part of the county, is around 2,400 feet. Flick, Coupe and others' No. 2 is below 2,250 feet. Seguin Oil Co.'s No. 1 Tierman is waiting on casing. Armstrong and others set 6-inch in No. 1 Bair at 2,100 feet. Howell Brothers are rigging No. 1 Selginar.

Locations have been made for Johnson & Tindley's No. 1 Bauer. Plateau Oil Co.'s No. 2 Banks, and Trinity Drilling Co.'s No. 1 Brinkhofer.

Luling Field

A number of wells on both sides of the San Marcos River in the Luling district are ready to drill in but are held up because of lack of pipe line facilities. On the Guadalupe County side, the Magnolia Petroleum Co.'s No. 3 Schubert is flowing 650 bbls. per day with the bit but a few feet in the sand. The United North and South Oil Co.'s No. 1 McKean is an offset. The Gulf Royalty Co.'s No. 1 Allen, northwest from the J. K. Hughes Development Co.'s well, staged its third blow out during the week. The Hughes well is making 2,000 bbls. per day, flowing into earthen storage.

The United North and South Oil Co. is drilling in No. 9 Allen. Canaan's No. 1 Forsey is showing gas at 800 feet. The Dancigar Oil Co.'s No. 1 Dross, 2 miles northwest from production, is showing oil and gas in a sand at 1,800 feet. The pay sands in the field range around 2,150 feet.

Near the river on the Guadalupe County side, the United North and South Oil Co.'s No. 1 Baker and on the opposite side of the stream in Caldwell County, the Jarmon Oil Co.'s No. 4 Maggie Moore is drilling in. The Jarmon Co. has three wells on the Maggie Moore. If a producer is developed on the Baker it will connect up the intervening territory between the old field in Caldwell County and the new development in Guadalupe County, 3½ miles to the southwest.

The United North and South Oil Co., which opened the Luling Field, leads in development work on both sides of the river. It has three wells on top of the sand on the Stair lease on the Caldwell County side, ready to drill in. Derricks are up for six more on that side and locations made for seven wells. The Mock Oil Co. has started No. 1 Field. The Texas Co. is drilling No. 1 Allen on the Guadalupe County side with locations for three more. The Empire Gas & Fuel Co. has a location made. H. C. Thorman has a derrick up for No. 1 Harris.

In the old section of the field, the Grayburg Oil Co., Rio Bravo Oil Co. and Magnolia Petroleum Co. are drilling on inside locations, as are several smaller companies and individuals.

The Magnolia Petroleum Co. abandoned No. 1 Imhoff, southwest of Kingsbury, Guadalupe County, a wildcat, at 3,485 feet.

Calliham District, McMullen County

San Antonio refineries are reported to have purchased some of the Calliham crude at $1.30 per bbl. Hoard and others' No. 1 Bowers is a 75-bbl. well at 780 feet. No. 5 is drilling after setting the 10-inch casing and No. 6 is rigging. The South Texas Oil Co.'s No. 3 Calliham is testing at 765 feet and No. 1 Brown is shut down. The Southern Gas Co.'s No. 5 Lark is drilling at 920 feet. An usually shallow gas sand has been picked up by Lightfoot and others in No. 5 Lark on the north side of the Frio River. It is estimated at 5,000,000 feet at 470 feet and offsets a test started by the Coyle-Concord Co. in the river bed. The Allen Oil Co.'s No. 3 Stitz is good for 125 bbls. at 780 feet. The Lightfoot interests are preparing to drill No. 1 Aycock deeper to 3,500 feet from 2,000 feet at which depth it has been standing idle.

Rockdale-Minerva

The Texas Petroleum Development Co.'s No. 9 Neihaus, completed at 825 feet, is pumping 20 bbls. and No. 10 on the same lease is good for 10 bbls. Same company abandoned No. 1 Batte, its deep test at 2,785 feet. A location has been made for No. 2. It is 7 miles north of Rockdale. A shallow sand showing is reported from Henze and others' No. 1 Bingston, near Gause, at 750 feet. It is in the eastern part of Milam County. The Owens Refining Co. is starting No. 14 and 15 Henry. The Noack Oil Co.'s No. 1 Phillips is drilling around 1,800 feet. Baggett Bros' No. 1 Neiham is rigging. Locations for four tests have been made in the Dosa gas district, 6 miles west of Rockdale. The Fogel Oil Co.'s No. 7 McClelland is drilling and the Palmer Oil Co. has started No. 4 Sterlsky.

More Wildcats

The Ray Oil Co. is drilling No. 1 Englemen in Bexar County and the Associated Petroleum Co. No. 1 Miller in Atacosa County. In Medina County, the Witherspoon Oil Co.'s No. 1 Briscs is drilling and the Rydale Oil Co.'s No. 1 Schuerman is starting.

The San Marcos Oil Co. has rigged No. 1 Dobie in McMullen County.

The Gulf Production Co. is rigging No. 3 on Boling dome in Wharton County, where two previous tests showed rock salt and gyp. Rich and others are repairing derrick that collapsed while pulling the drill pipe from the hole near Hahenhal, Harris County. The depth is around 700 feet.

CALIFORNIA MARKETS AFFECTED BY WEATHER

LOS ANGELES, Cal., April 19.—The Pacific Coast is still having a full quota of rain and snow. The fact that this wintry weather has been somewhat late in its arrival, and the additional fact that once arrived it does not seem to be willing to leave, is having its effect on oil prices. Refined prices have been stiffening very satisfactorily until now but are not as strong now as they were a week ago.

There has been a noticeable weakening in natural gasoline, and spot lots which would have moved readily at from 12 to 13 cents a gallon a week or 10 days ago, are now finding it difficult to find buyers at anything over 11 to 11½ cents.

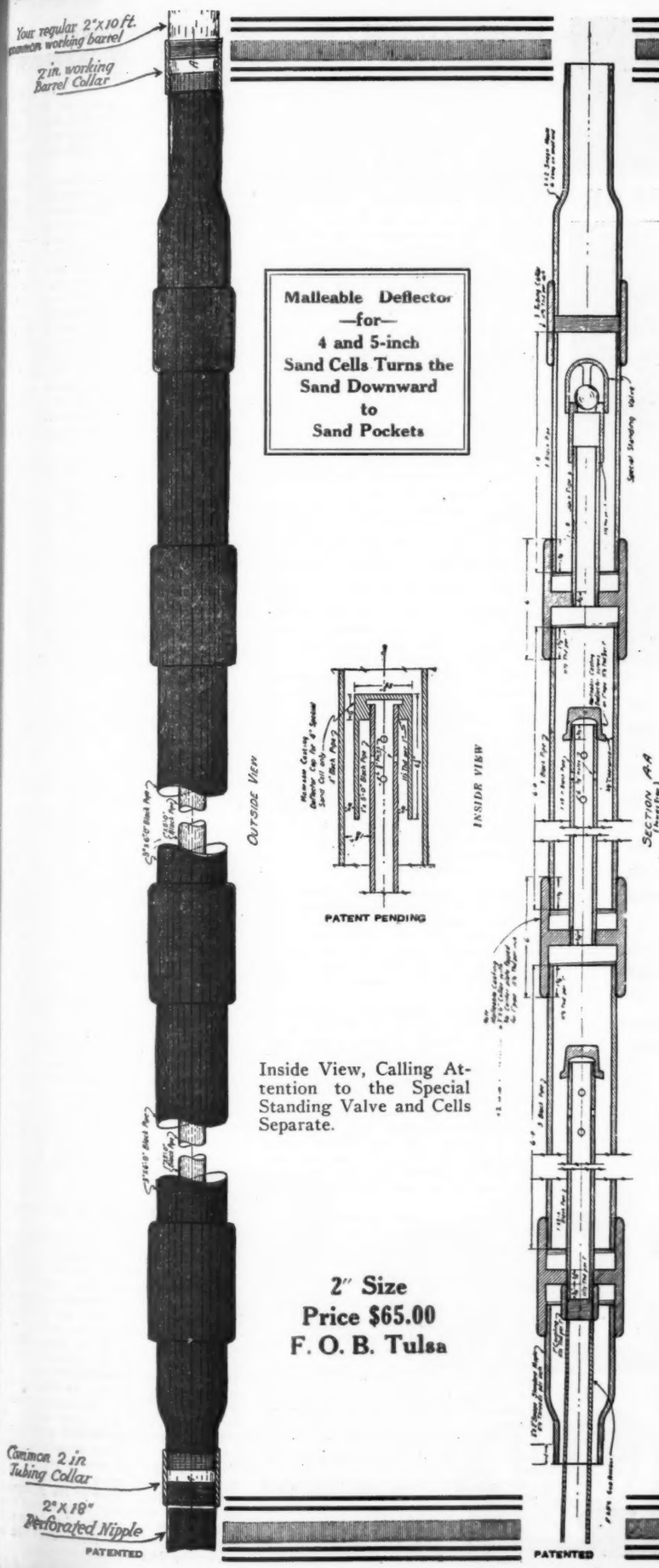
There has been no recession in the price of straight run New Navy, but the rather anxious forward buying characteristic of the past few weeks is no longer noticeable. The weather is probably the major influence, but there are also other factors, such as the relative scarcity of water white bottoms in which to lift cargoes from the California terminals.

The heavier products, lubricants and fuel, are still strong, no noticeable change having taken place during the week.

Getting back to natural gasoline, there is another plausible explanation for the pronounced weakness in this product. Up until a few weeks ago few of the small California refineries were able to get adequate supplies of crude. They had, however, built up a considerable service station trade and had to have gasoline in order to hold it. They therefore became urgent buyers of natural gasoline. This product was blended with such heavy blending stocks as could be obtained, in order to make up the shortage in straight run gasoline. In the meantime these refineries made an active canvass of all available landowners' royalty oil, and a considerable quantity of this has been made available to them, of course at a premium. With the supply of crude for the small refineries thus replenished, the demand for natural gasoline has become less urgent.

HUGHES COUNTY TESTS

OKLAHOMA CITY, Okla., April 21.—Two tests are to be started soon just south of Calvin, Hughes County, under direction of the Goldelline Oil Corp. of Oklahoma City, according to Hugh Harrill of Calvin. The block lies around Sections 11 and 12 in 5n-9e. Kimmel & Cree, of Tulsa, are to drill soon, having a block of about 2,000 acres, with Section 30-6-10 as the approximate center.



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Tubing, Pulling and Cup Expense More Than 50%

Here Is What One User Says:

We installed a sand cell made by The Foster-Hoefer Corporation of Tulsa, in Blankenship well No. 1, March 24, 1923 and it has been in the well 30 days and no cup trouble.

Heretofore we have been changing cups, practically every other day and rarely ever less than every third day. Have also been pulling tubing rather often.

The saving on this well during the 30 days, in cups, labor and chances of loss of production, by a big margin, offsets the cost of the sand cell ($65.00) and the cell itself is indestructible.

You can stop that eating sand before it reaches the cups in your common working barrel.

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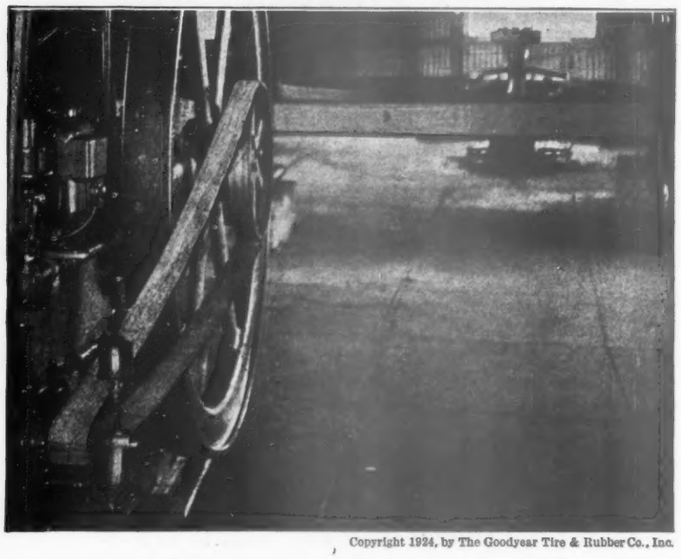

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SALIENT FEATURES OF NATURAL GAS SITUATION

(Continued from Page 68)

other consumers who are normal users of gas.

"It is a matter of common experience that the total money paid by the public per annum in any given community for gas service will remain approximately the same, regardless of what the rate per 1,000 feet may be. As the price of natural gas goes up, the average volume used per domestic consumer will go down. Therefore, an increase in price per 1,000 feet will not materially increase the total income, but it may enable the company to maintain substantially the same total income from the smaller volume of sales.

"Natural gas prices must go up, not because of any economic law of supply and demand, but because operating costs have greatly increased and only profitable operation will induce prospecting for new supplies, or secure the continued operation of small residue supplies. The fixed charges on a natural gas plant are larger than for any other utility and represent about 70 per cent of the total cost of gas service, and of course, go on irrespective of the volume of gas sold.

"Even a marked decline in commodity prices cannot prevent the inevitable increase in natural gas rates if the service is to be continued. There will be less gas available for sale each year, therefore, a smaller volume of gas must carry the larger cost burden. This will actually result in a reduction in profits but will enable the company to continue to serve at a smaller annual return to itself for a much longer period of time.

"The live question is not how cheaply natural gas can be obtained, but whether it can be obtained at any price that will insure continuity of service for the future. In view of the fact that even $1 natural gas would be only 40 per cent as expensive as any competing commodity or service that the consumers could buy, the stimulating of the hunting for new supplies, which will prolong the period of time that natural gas will be available, is of much more importance to the consumer than mere price.

Correct Use

"Correct use of gas in the home will enable the consumer to get the same service with a smaller volume of gas and thus pay a price that will induce the stimulation of conservation in the field, thereby prolonging the life and do this without any increase in total annual cost to himself.

"Capital for prospecting and hunting for additional supplies of natural gas to replace the rapidly declining present supplies cannot be commandeered, but can be secured only as the mining operation is made profitable. That is, only adequate prices in the field will induce capital to find gas. For this reason the public and rate regulating bodies must appreciate that a natural gas rate cannot coerce capital into the enterprise, but that capital will be induced into the enterprise only when it is made profitable to take the risk.

"Although the local natural gas company has a monopoly on the sale of natural gas in the city, natural gas itself does not have the monopoly of the local heating service since other fuels can be used to replace it.

"Using the test data from the Department of Home Economics, Ohio State University, for a typical day, and allowing 20 per cent additional fuel for baking, the monthly quantities of various fuels needed for cooking for a family of six would be as follows:

Natural gas, properly directed short flames:

Natural gas, properly directed short flames and insulated oven, 1,008 cubic feet.

Natural gas, usual type stove, 2,016 cubic feet.

Soft coal, 1,058 pounds.

Coal oil, 33 gallons.

Gasoline, 20 gallons.

Electricity, 205 kw. hours.

SALT CREEK PRODUCERS ASSOCIATION'S REPORT

The 1923 report of the Salt Creek Producers Association shows net income of $6,888,400, equal to $4.60 a share on the 1,496,859 shares of $10 par stock. Salt Creek crude sold from $1.65 to $0 a barrel in 1923.

Salt Creek producers is unusual among oil companies in that its income is practically all net, with only Government and other royalties, taxes and nominal operating expenses to deduct. Its properties are operated under contract, by the Midwest Refining Co. which pays all expenses and buys the production, paying Salt Creek Producers prices based on gasoline and kerosene markets. Base price is $1.42½ a barrel with gasoline at 7½ cents and kerosene at 7½ cents a gallon. For each 1 cent increase in gasoline the price received for crude oil increases 7½ cents and for each 1 cent increase in kerosene crude prices rise 2½ cents. Minor fluctuations in crude price occur, downward, when gasoline and kerosene prices go off.

With gasoline prices up about 6 cents a gallon from the low of 1923, Salt Creek Producers is receiving largely increased income. Of its $30,157,293 of assets, nearly $14,500,000 are represented by cash, Government securities, receivables and crude in storage. Current liabilities consist of $68,598 of accounts and notes payable and $874,694 reserve for taxes.

Salt Creek Producers owns about 3,000 acres in the heart of the Salt Creek Field. This and other property is set down in the report at $15,497,812, after the depletion and depreciation charges; $2,700,000 less than book value at the end of 1922. Property is only 20 per cent drilled, with a well to every 30 acres. Production is obtained from both the first and second Wall Creek sands. Recent developments show the third Wall Creek sand to be productive nearby, and Midwest Refining Co. has under way a heavy drilling program which will include exploitation of this third sand.

Salt Creek Producers used considerable of its current funds in 1923 to purchase Salt Creek crude oil when it was selling at extremely low prices. This asset was shown in the balance sheet as "interest in crude storage" at $3,846,102, a new item. This stored crude undoubtedly showed a substantial profit as Salt Creek crude is $1.60 a barrel, $1 higher than the price at the end of 1923.

Cash and Government bonds at the end of 1923 totaled $7,134,681, compared with $4,432,134 at the end of 1922. Of this $2,702,547 gain, about $1,000,000 was in cash and $1,700,000 in Government securities. Accounts and notes receivable of $3,605,951 at the end of 1923, compared with $4,643,816 the previous year, the $1,000,000 drop being reflected in the gain in cash and Government bonds. An item of $3,373,504, shown as "investment" at the end of 1922, does not appear in the 1923 statement and this is believed to represent the distribution to stockholders last year of New Bradford Oil Co. shares.

OIL EXTENSION IN RUMANIA

The current issue of the Moniteur du Petrole Roumain makes interesting reference to the extension of the country's petroliferous zones. The proof of the extension of the productive zone in the Meotic formation, under the Pontic, on the northern slope of the massive anticlinal bed of Moreni as far as Gura-Ocnitzei, was furnished by the striking of oil by borehole No. 5 of the International; the fact that well No. 4 of the Phoenix Co., and formerly of the Rumanian Consolidated Oilfields, Ltd., has struck oil proves the extension of this zone toward the east over a further distance of about 1½ kilometers, and offering prospects for developments of great importance. This news is of importance to the Rumanian oil industry generally, since it adds very materially to the prolific oil horizons now proved in the Meotic formation, which lies below the Pontic.

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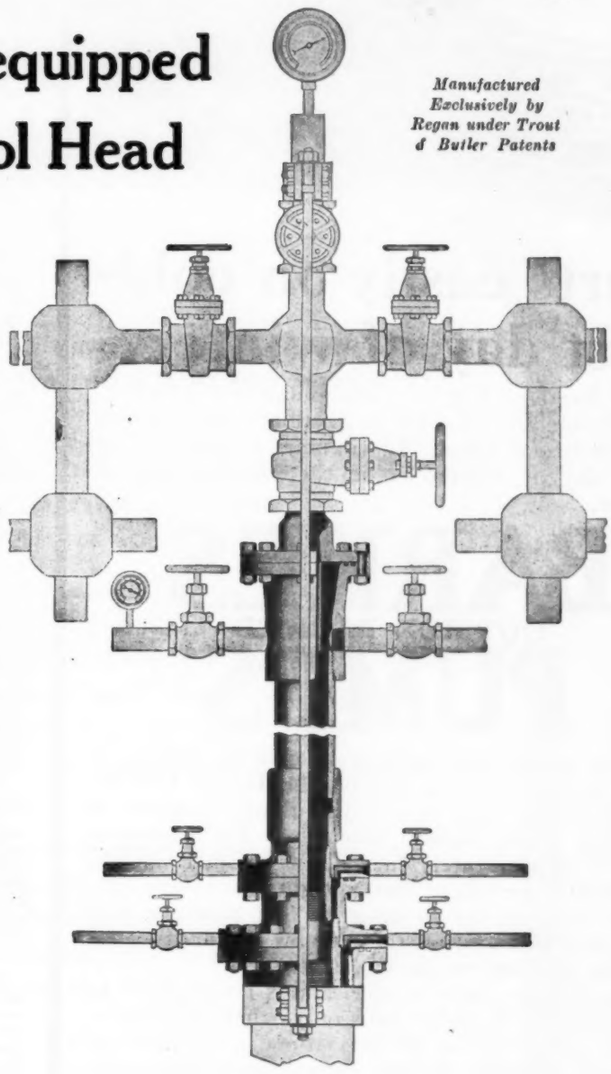

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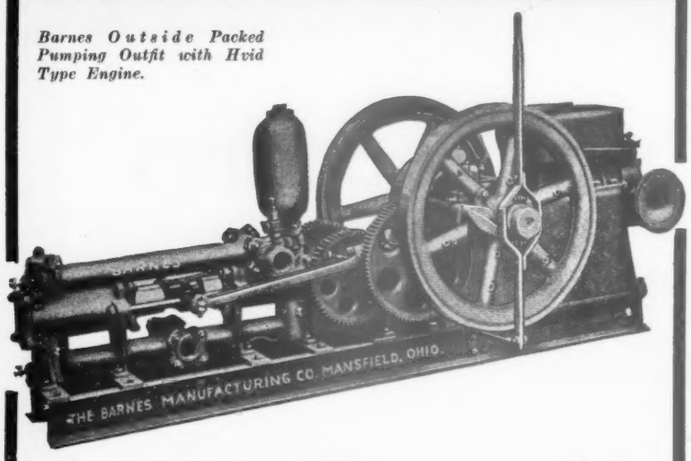

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NATURAL GASOLINE CONTRACTS AND OTHER QUESTIONS ARE DISCUSSED

By Ray I. Short
Superintendent Casinghead Gas Division, Prairie Oil and Gas Co.
Before Annual Convention Association of Natural Gasoline Manufacturers

The manuafcture of gasoline from casinghead gas is regarded a wonderful industry, but it is not unlike any other business, it can be overdone. Since the infancy of this industry and up to a short time ago the delivery of casinghead gas was always treated by the producer as a secondary consideration. They did not allow it to interfere, in the slightest way, with the producing of the oil. This condition still, of course, exists but to a less extent as the value of gasoline producing gas has become more important. This matter has caused considerable friction between the manufacturer and the producer and much of it has been caused by different ideas as to the territory that each should cover. It is my opinion that the producing department, or the producer should control the gas gathering system to the point of delivery, which should be the meter.

The internal combustion engines, which in recent years have become a prominent factor in producing power, have been the cause of the great consumption of gasoline and this has brought about conditions that look extremely favorable for a great accumulation of wealth in this industry, and to many, failure seemed impossible. The result was, plants were built, gathering systems installed, regardless of cost and without careful consideration of the future, having in mind, in many cases, that all wells drilled would be productive of casinghead gas, and that it would continue to become richer in content, and that with the continued development of the fields, the volume would be maintained. With these flattering prospects in view a large number of plants were built that resulted in great losses. By these experiences it has become very important to the producer that careful investigation be made of the possibilities of the fields for this industry and that marketing facilities be most carefully considered.

The producers, or sellers, are deeply interested in plant efficiency. Much could be said and suggested on this subject and from my observations much could be done in the way of plant operations and maintenance but no great criticism should be made at this time as the conditions which the manufacturer has operated under for the past year have been very difficult.

Question of Contracts

Contracts for the purchase of the gas have not been given the careful consideration that they should have had, and it is a matter that the producer is giving closer attention now than heretofore. Manufacturers have taken contracts that have afterwards proved ruinous by reason of uncareful tests and surveys. Attempts have been made by them to cover in detail all plant operations. This cannot be done and it very often results in misinterpretation of the contract and finally in litigation. The latter should be avoided as much as possible and it is a great pleasure for me to say that what few controversies have come to my attention have been adjusted to the entire satisfaction of those concerned. A spirit of fairness seems to be very prevalent in this industry and for that reason I do not think it advisable to attempt to make provisions for every thought and incorporate it in a contract. Custom will govern many questions. I have known of a number of cases where contracts have been abrogated for various reasons and it is a spirit that should predominate between both parties to the contract. While it is the purpose of your contract to govern your relationship in this business, and the manner in which it should be conducted, still there are times that conditions warrant a change, and both parties should be susceptible to and carefully consider the reasons for the proposed change. However, no modifications should be made unless it is expressly understood, and so stated in writing, the purposes for which the changes are made, and if they are to be of a temporary nature they should in no way effect any other part of the contract.

Measurement of Gas

The measurement of gas cannot be given too much attention. While we have very accurate instruments for this purpose, I believe that they should be tested every 30 days, as there are conditions that will cause them to operate inaccurately and as measurement of gas is a basis of settlement it is necessary that they be kept in good order. This is of great importance to the producer as it is he who is looked to and held responsible, by the landowner, for the correct measurement of the gas.

Physical field and plant tests are also a basis of settlement and while there are a great many ideas as to where and how these tests should be made, and as to the equipment of the testing apparatus to be used in making these tests, there seems to be comparatively few controversies arising from this source. Suggestions as to new ideas and improvements should always be carefully considered.

Vacuum is a matter in which the producer should have the greatest cooperation of the manufacturer. This cannot be watched too closely and it is vital that the gas gathering systems be kept in first class condition as it is an easy matter to cause a great amount of trouble and serious losses by negiecting any part of them.

Gas vapors from flow tanks have recently required the attention of the producer and this has been of great benefit to the manufacturer and the producer as well. Great caution should be exercised in the connection of the tanks and the application of the vacuum.

Residue gas is required by the producer for operation purposes and it has become a serious problem, due to the increased shortage of dry gas and every effort should be made by both the producer and manufacturer to conserve it in every possible way. The return of a sufficient amount of dry gas, or a percentage of wet gas after the extraction of the gasoline, is an obligation that is frequently violated by the manufacturer. There is great waste by employes of both parties and every effort should be made to stop it.

OIL TRACES IN GREECE

In the Epirus, near the frontier line dividing Albania from Greece, many shallow borings for oil have been put down, the depths not exceeding a few hundred feet. This development was carried on by a French company, working under a concession granted by the Greek Government. Although the appearance of the geological structure would lead to the opinion that oil exists in the rocks and that petroleum may be produced in commercial quantities, the operations have been very disappointing. The geological examinations, the strata disclosed, and the surface indications met with suggest a more systematic working of the area. The islands appear to be more worthy of attention. Cephallonia island has been explored for oil, and while indications have been met with, investigations have not been satisfactory. Zant Islands has convincing proof that considerable quantities of a medium gravity oil exists in the rocks of the southern part; that there are two horizons; that the oil will be found at depths of 500 to 600 feet, and 2,000 to 2,500 feet. Herodotus Island in ancient times was known as a petroleum-bearing region.

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CALIFORNIA'S NATURAL GASOLINE INDUSTRY

(Continued from Page 60)

considerable controversy and has placed many obstacles in the path of the healthy development of the industry is that of royalty rates. Many of the newly formed companies in bidding for gas have offered excessively high royalties which, in the eyes of the inexperienced oil producers, offer much greater returns than the more conservative rate offered by the established operators. These high rates are usually based upon an inaccurate method of test as applied to the gasoline content of the gas from various sources and actual gallonage based upon plant sales. The more established operators know the conditions, and from previous practice know that a lower rate of royalty with an accepted accurate method of test and a greater plant efficiency, together with an established market for the gasoline produced, offer greater actual cash royalty value.

Standard Rate Needed

But convincing the small operator is quite another matter. Many plant failures have been caused by the high royalties paid and a spot market for the gasoline produced. On the other hand many producers have been dissatisfied after hurriedly making contracts with small operators who were unable to meet the terms of the contract and continue operation. A great need is seen for an accepted standard form of contract and rate of royalty such as prevailed in the Mid-Continent fields.

The days of marketing as natural gasoline anything recovered from gas by compression and cooling, or absorption, are passing. The term is becoming one which means a hydrocarbon series having certain specified characteristics. These characteristics will tend to make the producers much more careful of their plant control and development. The refiners appreciate the value of natural gasoline as a blending agent, for the high gravity oils now being produced yield profusely of gasoline, the product being very low in gravity with practcally no light material which is required for a perfect motor fuel. This light or low initial boiling point material must be supplied from natural gasoline. The chain of distillation must however, be uniform, and for this reason the specifications which will govern the price and market for natural gasoline must be worked out very carefully.

At the present time the operators on the west coast are not stabilizing their product, although several companies are experimenting with apparatus for this purpose. With the development of this equipment the gasoline producer will fortify himself with the refiner and will be enabled to see a continued market for his product.

Seasonal Ratio

The consumption of California gasoline now varies from approximately 3,000,000 gallons per day in the winter months to 3,500,000 in the summer months. This enormous consumption forces the refineries to their maximum output. Nearly all refineries are now making additions to their present plants or are building new plants at more advantageous locations. From this it would appear that they are anticipating greater consumption in the future. With the drop in total oil production of the State, the raw material from which the finished product is to be obtained must be furnished by the development of new fields now being prospected, or by the importation of crude from other sources. The same result may be obtained by increased efficiency in refining methods.

In any event the natural gasoline manufacturer apparently faces a period of increased activity to produce a sufficient supply of natural gasoline to meet the refiners' needs. This will to some extent offset the crying demand for specification material, as should the supply become too small to meet the demand, the refiners will accept material which may not be as perfect as desired, but which can furnish the much needed light fractions.

Much prospecting is being carried on in all parts of the State. Fields which have made good showings are Torrance-Redondo, Compton (now being called Dominguez), and Wheeler Ridge. Extensive work is being done at Rosecrans, Rideout Heights, Maricopa Flat, Anaheim and Balboa. Torrance is the only one of these fields yet to have gasoline production. There are now seven plants in this field which are apparently operating at a disadvantage, as the gas volume is not holding up as well as expected.

At Compton the Union Oil Co. is contemplating the erection of a plant. Meanwhile the gas is being treated by a small independent operator.

The New Mexico and Colorado fields may play an important part in the future development of the industry in the West, as should these fields be extensive, California offers the nearest outlet to the world markets.

PIERCE OIL CO. PLANS GO TO STOCKHOLDERS

William H. Coverdale, head of the Pierce Oil Corp. has sent a letter to stockholders informing them that the present company will continue in existence as a holding company, free of indebtedness, its stock secured by holdings of stock of the Pierce Petroleum Corp., the new company, 1,100,000 shares of which they will receive in exchange for the business and assets.

Stockholders of the present company, according to Mr. Coverdale's letter, will have the privilege of subscribing for the stock of the New Pierce Petroleum Corp, but this is entirely optional. In addition, stockholders will have an opportunity at some future date to exchange their stock for stock of the new company in the proportion of approximately eight shares of new Pierce Petroleum Corp. stock for one share of preferred stock of the present company and eight shares of the present common stock. This exchange also is optional.

"The subscription of the stock of the new Pierce Petroleum Corp. has already been underwritten and it will become effective after stockholders ratify the proposed transfer of assets of the Pierce Oil Corp. to the Pierce Petroleum Corp. at their meeting, May 7," said Mr. Coverdale's letter.

TRIESTE OIL CONTRACT

It is reported that a convention exists between the Italian Government, on the one hand, and the Anglo-Persian Oil Co. and the Oesterreichische Naphtha Import Gesellschaft, on the other, whereby the former agreed to rent for a period of 30 years to a corporation to be formed later, the majority of whose capital should be Italian, the oil storage tanks, etc., at Trieste, and the land on which they are located. In order to take advantage of the convention in question there has been incorporated at Genoa a new Italian corporation called the Societa Benzine Petroleum whose declared objects include all phases of the oil business from production to refining and distribution. The original capital of this company is 10,000,000 lire, which amount will soon be increased to 100,000,000 lire. Forty five per cent has been subscribed by the Anglo-Persian Oil Co. and 55 per cent by Italian interests.

PIPE LINE FOR COLOMBIA

TORONTO, April 19.—The International Petroleum Co., after a thorough investigation of transporting crude oil from its producing properties in Columbia, has definitely decided that barging oil down the Magdalena River is not feasible and that laying pipe line is the only possible means of transporting oil in quantity from the interior to the coast. This decision was announced by Vice President A. M. McQueen, who has just returned from the annual tour of inspection of South American properties.

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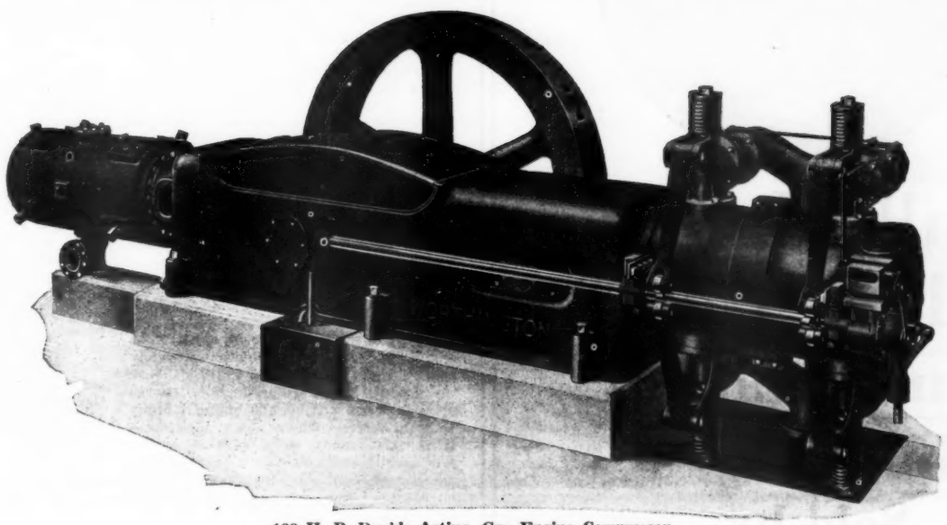

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The design is such that if the power requirements should become too heavy for the 80 H. P. engine it can be converted into a 160 H. P. unit by replacing the single acting cylinder with a double acting cylinder and piston and adding inboard valve gear.

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REPORT ON HUNTINGTON BEACH FIELD SHOWS EFFECT OF CLOSE DRILLING

A report on the Huntington Beach, California oil field has been made by J. B. Case, chief deputy supervisor of the California State Mining Bureau and V. H. Wilhelm, petroleum engineer and has been issued by the California State Mining Bureau. The report includes maps and drawings showing producing formations in the field, water analyses, etc. It is a complete story of Huntington Beach, and too lengthy to be given in full.

The Huntington Beach Field, in Orange County, California, is 41 miles southeast of Los Angeles and 12 miles southwest of Santa Ana, in the southern part of the Los Angeles Basin. The field is located on a high point of the coastal fold, which extends from Newport on the southeast to Beverly Hills on the northwest and which is marked by the productive field of Beverly Hills, Dominguez Hill and Long Beach.

The Huntington Beach Field had produced up to March 1, 1924, a total of 51,803,896 bbls. The authors close their report as of December 1, 1923, up to which time they say it had produced about 40,000,000 bbls. At the date of the report the production was declining, which it has continued to do since falling from an average of 73,342 bbls. in November to 53,000 bbls. (estimated) the week ending April 5.

Decline Very Rapid

This decline, the report of Messrs Case and Wilhelm says, is very rapid in the closely drilled areas, but in districts in which the wells have been more widely spaced, there has been no great decrease in production, and production curves show a very distinct flattening. Along Garfield Street where town lot conditions exist, many wells have ceased to flow, while still making a considerable amount of gas. On entering the wells an apparent fluid level is found at about 2,000 feet, but this is due to the fact that the fluid is held by pockets of gas in the fluid column. When the gas is killed by running water into the well, the true fluid level is generally found at about 3,200 feet. When an attempt is made to pump these wells, a small amount of water is produced with the oil, but this is probably due to the release of pressure on formations which contain a low head water.

The field has been developed on a strict basis of uniform shut-off, and is consequently in a good condition in regard to water. In the northern and central portions of the field, the top of the Ashton zone was the point of shut-off of all wells, regardless of the presence of intermediate edgewater below ths point. In the southern area, south of Seventeenth Street, the top of the Bolsa zone, or locally called Miley zone, was the point of shut-off, regardless of the probable depleted condition of the upper portion of the zone. In the Main Street area, in the townsite, the heavy oil zone was rapidly depleted due to close spacing of wells, and the point of shut-off in the later wells was lowered to the top of the Bolsa zone, after mudding the oil sands of the upper zone to keep water from entering them.

Since the large holdings of the Standard Oil Co. have been but partially developed and tested, it is difficult to make a close estimate of the total or ultimate production of the field. The total ultimate production has been variously estimated at from 70,000,000 to 143,500,000 barrels. Due to close drilling the operations of the small companies, with few exceptions, have been unprofitable. This close drilling has increased the present production per acre, but has decreased the ultimate production per well, and consequently caused financial loss. The field is still young, being only a little over three years old, but in point of development it is practically drilled up. Future operations will consist mainly of repair work, and probably some new development on the large holdings of Standard Oil Co. leased from the Huntington Beach Co.

Results in the field have shown that line wells do not necessarily protect the central portion of a lease from being drained by offset wells. There does not seem to be any adequate substitute for delayed drilling, because of the fact that the oil does not act as a seal for the gas, which consequently migrates a considerable distance and is produced by the offset wells. This conclusion is supported by the fact that very small production was obtained by the later wells drilled on the Holly Oil Co. property and on the Savage lease of Petroleum Midway Co., Ltd.

Practically all the oil produced in the field has been drawn from about 700 acres, which would indicate a production to date of 50,000 barrels per acre. The actual proved land is probably over 1,000 acres, but this area is rapidly being decreased due to the encroachment of edgewater.

On April 15, 1923, the field was producing 124,406 barrels of oil per day from 149 wells, an average of 835 barrels per well. Beginning with this date the flow from practically all the large wells was restricted to curtail production in order to come within the limits of pipe line and storage facilities.

On July 12, 1923, the maximum production of the Huntington Beach Field was reached, with an output of 127,100 barrels daily from 199 wells, an average of 639 barrels per well. On this date it was estimated that 30,000 barrels of potential production was restricted in the field. After the maximum of July was reached, the production of the field continued to decline, notwithstanding that by December 1 most of the restricted production was released.

General Geology

The surface formations, the report says, consist of unconsolidated deposits of sand, gravel and blue clay, varying in thickness from 450 to 700 feet, being thinnest on the higher portion of the structure, where erosion has been greatest. The beds are of Pleistocene age and are flat lying, giving no evidence of dips or of faulting.

Underlying the surface formations is the Fernando (Pliocene age) which, for purposes of description in this report, has been divided into two parts, and termed "upper Fernando" and "lower Fernando." Formations of the upper Fernando are a succession of blue and gray shales, with coarse sands, gravel, sandy shales, with an aggregate thickness of about 1,300 feet. Within the formations of the lower Fernando are the principal productive measures of the Huntington Beach Field Brown sticky shale, brown sandy shale with thin streaks of sand giving a laminated appearance, and lenticular sands make up the lower Fernando. The proportion of shale to sand decreases as the distance down the dip of the structure increases, many of the sand beds apparently grading into sandy shale and shale of the highest points on the structure.

In the earliest days of the field, the structure was generally considered to be an anticline with a general northwest-southeast trend, the crest of the anticline plunging toward the southeast. Later developments, along what appeared to be the crest of the anticline, indicated that the oil had accumulated in a monoclinal structure with a northwest-southeast strike, sealed at the upper limits by large shale bodies and having very prolific oil sand down the dip to the northeast, indicating deposition under shoreline conditions. An uplift of the formations at about the limit of the deposition of the sand would account for the presence of large shale beds on the top of the monocline. The general dip of the monocline in the northern part of the field is about 41 feet to the hundred, while in the southern portion of the field, adjacent to

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the townsite, the dip appears to be much less.

History of the Field

Oil was discovered at Huntington Beach on May 24, 1920, on which date the Standard Oil Co. tested its well No. "Huntington A" 1, drilled to a depth of 2,199 feet. The well produced about 45 barrels of 14 gravity oil. It was then drilled to a depth of 2,381 feet, put on the pump on August 3, 1920, and produced about 70 barrels of oil daily. It is still producing about 7 barrels of heavy oil daily.

Added impetus to drilling was given the field with the completion of well No. "Bolsa Chica" 1 of Standard Oil Co. on November 13, 1920, drilled to a depth of 2,549 feet with an initial production in excess of 2,000 barrels per day of 25 gravity oil. This well has produced to date over 1,700,000 barrels of oil.

After the bringing in of well No. "Bolsa Chica" 1, development was very rapid, due to the fact that a considerable portion of the field consisted of town-lots, which resulted in a great number of small leases being acquired by as many small concerns, each lease requiring immediate drilling. This town-lot drilling was not very profitable, as evidenced by the fact that two years after the discovery of oil the total daily production of the field was only 19,953 barrels of oil with 71 wells producing, an average of 293 barrels per day per well.

On April 24, 1921, nearly a year after the discovery of the field, Eddystone Oil Corp. brought in its well No. "Ashton" 1, Sec. 34, T. 5 S., R. 11 W., S. B. B. and M. (now owned by Shell Co. of California), in the northern part of the field. This well was brought in from a depth of 3,455 feet with an initial production of about 1,300 barrels. It was one of the most important wells in the field, as it extended the proved area about one-half mile down the dip of the northeast.

The next well which had a marked influence on development was E. J. Miley well No. 1 (now Pacific Petroleum Corp. well No. 1), in Sec. 2, T. 6 S., R. 11 W., S. B. B. and M., in the southern part of the field. It was drilled to a depth of 2,693 feet and brought in on July 21, 1921, with an initial production of about 1,500 barrels per day.

The fact that a greater volume of production was obtained by deeper drilling resulted in the practice of passing up the production in the upper oil measures for the more prolific production of deeper sands.

Oil Zones

The oil-bearing formations in the Huntington Beach Field are divided into zones, separated from each other by intermediate water. In order of depth at which these zones are encountered they are: heavy oil zone, Bolza zone and Ashton zone. These zones are all within the Fernando and constitute the principal productive formations of the Huntington Beach Field. In addition a small production is obtained in a few wells from the Puente formations (Miocene), this horizon being known as the Surf zone.

Heavy Oil Zone

The upper or heavy oil zone is confined to a narrow strip along the top of the monocline. No oil is found in it where the top is encountered more than 2,400 feet below sea level. In the southeastern portion of the field it is locally known as the "town zone" and reached its maximum development on lot leases in the townsite. In the major portion of the field no attempts have been made to produce from this heavy oil zone since the test made in the discovery well.

Above the heavy oil zone is a considerable body of soft shale, or clay, as it is usually logged, containing several streaks of tar sand, which are not productive and which have sulphur water in contact with them. The productive formation of the zone, consisting mainly of soft sands, is about 120 feet thick, and has been a very consistent producer in a few wells. Well No. "Huntington E" 2 of Standard Oil Co. has been the largest producer from this zone, but the most spectacular performer was Pan-tages-Huntington Oil Co. well No. 1, which flowed at the rate of 700 barrels daily for two months, when water broke in from the bottom. The gravity of the oil varies from 14 degrees to 17 degrees Baume. This zone is but a small factor in the total production of the field to date. However, the oil has special lubricating qualities which, it is considered, make its production commercially profitable.

This heavy oil zone is underlaid by intermediate water, which has been located by Standard Oil Co. in its wells No. "Huntington B" 6, "Huntington E" 5, "Huntington E" 7 and "Huntington D" 2. The water is very close to the bottom of the heavy oil zone, or within it, as demonstrated by plugging operations. In two wells, Standard Oil Co. well No. "Bolsa Chica" 1 and Amalgamated Oil Co. well No. "Huntington Beach" 3, this intermediate water was not found. These are exceptions to the general condition and operations are planned as though they did not exist.

Immediately below this intermediate water is a shale body, which varies in thickness over the field, reaching its maximum in the southern area, where a stratum of brown sandy shale and sticky shale about 300 feet thick is found. This shale bed is the impervious capping of the Bolsa zone lying just beneath, and is the stratum in which water strings are cemented above the Bolsa zone.

Bolsa Zone

The top of the Bolsa zone, so called because of its discovery on the Bolsa lease of Standard Oil Co., is encountered from 2,400 to 2,500 feet below the surface, along the top of the monocline. Oil in the upper sands of this zone does not extend very far down the dip, before it is replaced by edgewater, known as the Bolsa water.

The main productive formations of this zone consist of from 120 to 300 feet of oil sands with intervening shale strata. The shales when wet are mainly brown in color, but when dry are light blue or grey. The gravity of the oil varies from 21 degrees to 27 degrees Baume, with the lightest oil at the top of the zone. In Standard Oil Co. well No. "Jones Community" 2, the full thickness of the zone was penetrated and a small production of heavy oil was obtained and considerable sand trouble experienced. The bottom portion of the hole was plugged, with the result that a fair production of light oil was obtained with no sand troubles.

Good production was obtained from the Bolsa zone where the wells are high enough on the monocline, and the total production from this zone will be an important part of the total ultimate production of the field. Forty-eight wells were producing from this zone as of December 5, 1923, with a total average production of 6,140 barrels daily, as compared with 43 wells yielding 7,462 barrels for the week ending July 28, 1923.

It has been definitely determined that a water sand underlies the producing measures of the Bolsa zone over the greater portion of the field, and this is known as the Copeland water. However, this water is not present along the top of the monocline, nor in an area including and immediately surrounding E. J. Miley well No. 1, as shown by Amalgamated Oil Co. well No. "Huntington Beach" 3, Miley-Keck Oil Co. wells No. 13 and 15, and by Petroleum Midway Co., Ltd., well No. "Barker" 1. The limit of the productive area for the Bolsa zone is marked by the 2,950-foot contour as shown on Plate 1.

Ashton Zone

The Ashton zone obtained its name from its discovery on the Ashton lease of the Eddystone Oil Corp., and has proved to be the most important zone in the field. There is from 30 to 50 feet of sticky shale immediately overlying the producing formations on this zone, in which a definite water shut-off may be

(Continued on Page 130)

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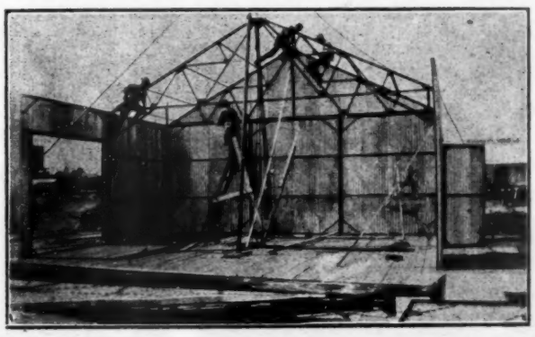

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REFINING AND MARKETING

USE CALIFORNIA CLAY IN ALSATIAN REFINERY

LOS ANGELES, Cal., April 19.—With the exception of a very small production at Tegernsee, Hanover and Alsace, Germany, was without crude production for the larger part of the war. A certain amount of crude was made available to her as a result of the occupation of Rumania by the armies of the Central Empires during portions of 1917 and 1918. Because of the urgent need for petroleum, a very remarkable development took place in Alsace. As previously stated, the production there was very small. It was found to be impossible to enhance it by the usual methods and it was therefore necessary to develop mines for oil along the same lines which are followed in the coal mining industry. Mining for oil is of course not new, but the technique developed in this Alsatian development is remarkable for its precision and the great care taken to eliminate the great hazards to life which have characterized previous attempts at oil mining.

After the war the Pechelbronn properties in Alsace were taken over by French interests, and the latter have continued the progressive development begun under the stress of war-time need by the Germans. The development of refining technique has been just as progressive as the development of production methods. A full line of products are made from gasoline to cylinder oil.

At the present time two representatives of the French Pechelbronn interests are in California, primarily to become fully acquainted with the fine points in the use of high powered absorption clays for use in oil refining. The clay which will be used almost exclusively in Alsace will be produced in California and shipped through the Canal. The Pechelbronn refinery will also use a number of processes for the refining of lubricants which have been developed in California during the past few years. All these processes are based on the use of absorptive clays for neutralizing acid-treated and removing from it those constituents which produce a dark or unstable color, high carbon test or other similarly undesirable properties.

OIL COMPANY AIDS NEODESHA

NEODESHA, Kas., April 21.—The Standard Oil Co. (Kansas) pays 75 per cent of the taxes of Neodesha city and township, according to the county treasurer. Operation of the company's refinery here, one of the largest and most substantial industries of this sction, has done much to make Neodesha noted for its street lighting, paving and good schools. Taxes received during the past year follow: Assessment for Neodesha Township—personal property, $130,428.-64; real estate, $82,565.63; state assessment, $30,814.27; total $243,808.54. The Standard Oil Co. pays $118,271.56 in personal taxes and $63,354.24 in real estate taxes.

NEW YORK STATE MARKETERS

The third annual meeting and convention of the New York State Petroleum Marketers Association will be held at the Onondaga Hotel, Syracuse, N. Y., on Monday, May 5. The afternoon session will be devoted to a business meeting, including the election of officers and directors. L. V. Nicholas, president of the National Petroleum Marketers Association, Chicago, will deliver an address on "What Is an Independent Oil Man and Why?" at the annual banquet in the evening. A. S. Matthews, of the Pennzoil Co., Buffalo, is president, and Joseph H. Brink, Syracuse, is secretary.

SAYRE REFINERY STARTS

SAYRE, Okla., April 21.—Oil was started through the stills of the Sayre Oil & Refining Co. here recently. Crude from the new Beckham County district is being utilized.

ENGINE DISTILLATE EXPLOSIONS PUZZLE

LOS ANGELES, Cal., April 19.—Engine distillate is a characteristic Pacific Coast product. It is essentially a heavy naphtha with an initial of 200 to 250 degrees F., and an end point varying all the way from 430 to 500 degrees F. During the past two months several severe explosions have occurred in refineries in the Los Angeles district. These have been due to the ignition of relatively small amounts of engine distillate contained in large tanks. The product, even more than gasoline, tends to form sustained explosive mixtures when pumped into empty tanks. The vapor pressure of engine distillate is low, and evidently just sufficient light vapor passes off into the air contained in the tank to make a dangerous mixture. In each of the explosions referred to the cause of the ignition has been unknown. Many clever guesses have been made, and static electricity possibly receives more credit for causing the damage than any other possible cause. The problem is a serious one and is being studied with great care by California refiners.

ENGAGE LUBRICATING ENGINEER

The Marland Refining Co. has secured the services of James A. Edwards, as lubricating engineer. Mr. Edwards was connected with the Hall-Scott Motor Car Co. for 10 years as superintendent of the motor testing and erecting departments, supervising the installation of aircraft engines and planes for the United States and Japan. He spent a year in Japan supervising the installation of his company's motors in Japanese airplanes. For the past 4½ years he has been employed by the Associated Oil Co. of California, as chief enginer of the motor testing department and as chief lubricating engineer in charge of automotive lubrication.

DALLAS DEALERS ORGANIZE

DALLAS, Tex., April 21.—Organization of the new Independent Gasoline Dealers' Association of Dallas and Dallas County was effected here at a smoker recently. John E. Farr was elected prsident. Jack Estes, of the Yuba Refining Co., C. D. Cain, of the Cain Oil Co., and others participated. A committee reported concerning a visit to the Ellis County Independent Gasoline Dealers' Association. Other members reported that numerous associations have been perfected recently in Texas which seek to give uniform service to the public at a minimum of expense.

SAPULPA REFINING CO. PLANT AGAIN RUNNING

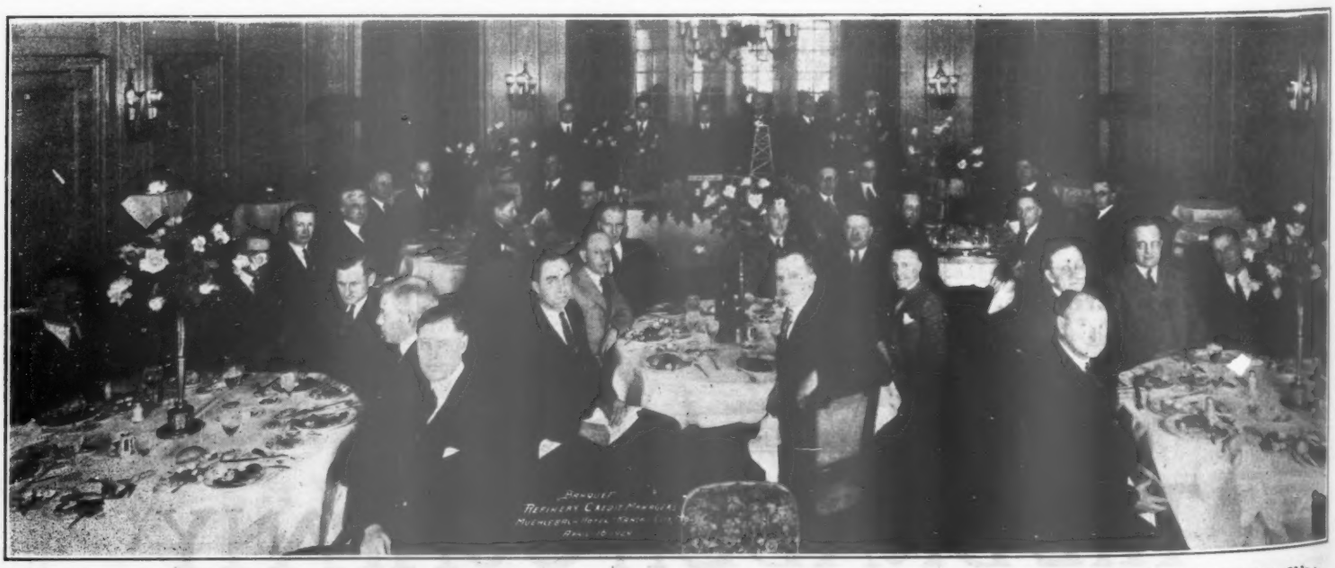
Four stills of the Sapulpa Refining Co.'s plant at Sapulpa, recently acquired by the Mutual Oil Co., were fired for the first time in several months on Thursday, April 17. Other equipment was gradually put into service until the plant was reported running about 2,500 barrels daily on Monday, April 21. The Sapulpa plant has a capacity of 6,000 barrels daily and is equipped with six Cross cracking units.

An additional supply of crude was obtained by the Mutual through the purchase of a 55,000-barrel tank of oil from the Sheridan Oil Co. The tank was situated in Section 28-16-12 northern Okmulgee County, and was filled with crude which the Sheridan had produced on nearby leases.

ENTERS DISTRIBUTION BUSINESS

SHAMROCK, Tex., April 21.—J. A. Hilburn, formerly publisher of the Shamrock, Texan, has purchased a half interest in the oil distribution business of S. B. Spurlock of Amarillo. These men have the agency in that city of the Texhoma Oil & Refining Co.

BANQUET OF REFINERY CREDIT MANAGERS AT KANSAS CITY LAST WEEK



The following registered at the three-day conference of refinery credit managers held April 16-18 at the Hotel Muehlbach, Kansas City; F. L. Bunn, Tidal Oil Co., Tulsa, Okla.; J. R. Trisler, Imperial Refining Co., Tulsa, Okla.; J. W. Hallman, Sun Oil Co., Philadelphia, Pa.; A. G. Elliott, Pure Oil Co., Tulsa, Okla.; G. A. Barnes, White Eagle Oil & Refining Co., Kansas City, Mo.; J. A. Chatfield, National Petroleum News, Tulsa, Okla.; C. O. Willson, The Oil & Gas Journal, Tulsa, Okla.; A. G. Johnson, Derby Oil Co., Wichita, Kans.; E. C. Claiborne, Derby Oil Co. Wichita, Kans.; A. C. Kleinschmidt, Empire Gas & Fuel Co., Bartlesville, Okla.; H. G. McLean, Empire Refineries, Inc., Tulsa, Okla.; James M. Judson, Sinclair Refining Co., Chicago, Ill.; W. N. Long, Galena-Signal Oil Co. of Texas, Houston, Texas; E. M. McGrath, Texhoma Oil & Refining Co., Wichita Falls, Texas; G. A. Burns, Roxana Petroleum Corp., St. Louis, Mo.; G. C. Goller, Lubrite Refining Co., St. Louis, Mo.; A. E. Moore, Sterling Oil & Refining Co., Wichita, Kans.; Jo n S. Wertz, Vickers Petroleum Co., Wichita, Kans.; W. Z. Brown, Producers & Refiners Corp., Denver, Colo.; W. J. Aiglers, Transcontinental Oil Co., Tulsa, Okla.; H. M. Edinger, Barnsdall Refining Co., Tulsa, Okla.; J. N. Bottomley, Oklahoma Producing & Refining Corp., Tulsa, Okla.; M. E. Kiesspie, Waite Phillips Co., Tulsa, Okla.; H. M. Edinger, Barnsdall Refining Co., Toledo, Ohio; J. D. Powell, Skelly Oil Co., El Dorado, Kans.; G. E. Craig, Miller Petroleum Co., Kansas City, Mo.; M. D. Creel, Marland Refining Co., Ponca City, Okla.; W. R. Gilchrist, Barnsdall Refining Co., Kansas City, Mo.; E. R. Leonard, Mutual Oil Co., Kansas City, Mo.; R. R. Cox, Kanotex Refining Co., Arkansas City, Kans.

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Distribution of Sulphur in Petroleum

Presence in Various Products Obtained From Light Mexican Crude Are Discussed by Government Chemists

By N. A. C. Smith and D. D. Stark
of the United States Bureau of Mines

Sulphur is apparently a normal constituent of crude petroleum, but in most crudes is present in percentages of less than one-half of 1 per cent. Some crudes, however, contain more, and occurrences have been reported of heavy asphaltic oils with as much as 5 per cent of sulphur.

In North America, the fields west of the Mississippi River are almost entirely free from high sulphur oils, the Lima oil from northern Ohio and Indiana, and the Petrolia crude in Ontario, being practically the only ones which contain sulphur in amounts over 0.5 per cent. In the Mid-Continent district the production of high sulphur crude in general is small and unimportant. The two main exceptions are the Healdton Field in Oklahoma and the El Dorado Field in Arkansas, both of which produce oils with considerable sulphur content. In the Wyoming Field, one sand, the Ember Sandstone, produces a crude of high sulphur content, and it is probable that this crude will be of considerable importance as production increases. At present, however, very little crude is produced from this formation. In the Gulf Coast conditions are irregular, some crudes being low in sulphur and others comparatively high. The same is largely true of California.

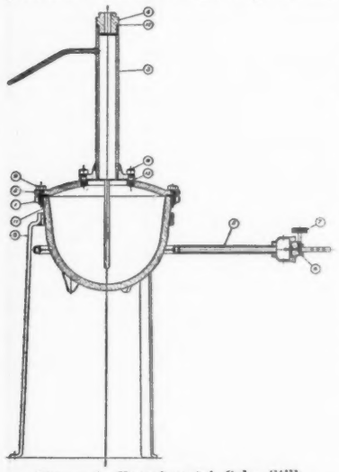

Figure 1—Experimental Coke Still

The crudes of Mexico contain notable amounts of sulphur, and as they have been of great commercial importance in this country, a typical sample of light Mexican crude was selected for the present study. It is probable that the results obtained apply also (but to a lesser degree) to other sulphur-bearing oils.

Scope of Report

The present paper describes a study of the distribution of sulphur in the various products obtained from light Mexican crude. It is known in refinery practice that sulphur occurs in all of the products made from Mexican crude, and in comparison with the products from low sulphur crudes the amount of sulphur in the individual products is relatively high. No information, however, seemed to be available as to what percentages of the sulphur originally in the crude appear in the various products. For this purpose a five-gallon sample of the crude was distilled under carefully controlled conditions.

Preliminary Distillation

The oil was first "skimmed" (that is, the distillation was stopped when the temperature of the vapor was 190 degrees Centigrade) in an electrically heated iron still, which is described in Bulletin 207. This preliminary distillation was deemed necessary as the crude contained 0.5 per cent of emulsified water, and by "skimming" the crude in this manner it was possible to obtain an anhydrous residuum which could be handled more easily in subsequent work. Furthermore, the residuum was less volatile and difficulties due to evaporation were therefore minimized. In order to ascertain the temperature at which to stop the distillation, the uncondensable gases generated were passed through ammoniacal cadmium chloride solution and at the temperature mentioned (190 degrees Centigrade) vigorous evolution of hydrogen sulphide was just beginning. The results of this distillation are given in Table 1 under the heading "Skimming distillation in 5-gallon still." It should be noted that in this table all of the percentages are given in terms of weight and not in volume as is customary in oil analyses. This was done to avoid discrepancies due to cracking. In distilling an oil which decomposes as easily as Mexican it is possible to obtain a larger volume of products than the volume of the original sample.

Distillation in Hempel Still

The fuel oil was then distilled according to two methods as shown in Table 1. One sample was distilled in the analytical Hempel still used by the Bureau of Mines, the distillate being cut into two fractions which are reported in Table 1 as "kerosene" and "gas oil and lubricating oil." For convenience in comparing the results of the various distillations in this table, all of the figures have been recalculated to percentages of the original crude oil and the "gasoline cut" as given in the "skimming distillation" has been included, thus making a total of 100 per cent recovered in the analytical distillation. Thus, the cuts as given are, first, gasoline (material boiling below 190 per cent Centigrade), second, kerosene (material boiling between 190 and 275 degrees Centigrade, at atmospheric pressure), third, gas oil and lubricating oil (distilling at 40 mm. pressure up to a vapor temperature of 300 degrees Centigrade). It should be remembered that these cuts are only roughly comparable to commercial products of the same names.

Coking Distillation

A second sample of this same fuel oil was distilled to coke in a two-gallon coke still which is illustrated in Figure 1. Here against the figures were recalculated to the basis of the original crude and the gasoline as obtained in the skimming distillation is included. This procedure is justifiable as it reproduces the percentages which would have been obtained if the original crude had been distilled in this still. In this case the cuts are gasoline (boiling below 190 degrees Centigrade), kerosene (boiling between 190 and 275 degrees Centigrade) and cracked distillate (which includes all of the material which distilled after the kerosene cut was made.) This cracked distillate, as will be seen later, contains a considerable amount of cracked gasoline and kerosene, but this should be considered as separate from the straight-run products. The fourth fraction of the coking distillation is coke.

Rerunning Cracked Distillate

A portion of the cracked distillate from the coking distillation was "rerun" in the 500 c.c. Hempel still. This gave three fractions, first, cracked tops (which includes the cracked gasoline and kerosene boiling below 275 degrees Centigrade), second, cracked gas oil and lubricating oil (which boil at a pressure of 40 mm. at a temperature below 300 degrees Centigrade) and, third, residuum, which in this distillation is negligible. It is probable that the entire amount of residuum is due to the oil which naturally refluxes from the column of a Hempel still and that there is practically no material boiling above 300 degrees Centigrade in this cracked distillation.

Distribution of Sulphur

These four distillations gave a very good idea as to the distribution of sulphur in products similar to those obtained commercially from Mexican crude and simulated conditions which actually occur in refining. As is generally known, the two principal methods of distilling Mexican crude are, first, skimming, which involves the distillation of the gasoline and some kerosene and leaves a residuum suitable for use as fuel oil or an additional treatment, asphalt; and second, the destructive distillation of crude to coke.

The percentage of sulphur in each fraction obtained in these distillations was determined according to Method 520.2 as given in Technical Paper 298 of the Bureau of Mines. From the sulphur values obtained the percentages of the total sulphur originally in the crude were calculated. For example, in the skimming distillation the gasoline obtained amounted to 12 per cent by weight of the original crude. It contained 0.39 per cent sulphur, and thus only 1 per cent of the total sulphur in the crude was present in the gasoline at the end of the distillation. In the same way 93.5 per cent of the total sulphur appeared in the fuel oil residuum, leaving 5.5 per cent of the total sulphur to be accounted for in

(Continued on Page 134)

TABLE 1
Distillation of Crude

Fraction—	Sp. Gr.	°A.P.I.	Weight Pct.	Pct. in Cut	Total Sulphur	Weight Pct.	Pct. in Gas	Pct. of Total Sulphur	H2S in Gas Pct.
Crude oil	.929	20.8	100.0	3.77	100.0	...	....	...	...
Skimming distillation in 5-gallon still:									
Gasoline	.739	60.0	12.0	.39	1.0	2.5	8.30	5.5	8.31
Fuel oil	.965	15.1	85.5	4.13	93.5	...	....	...	...
Analytical distillation in 500 c.c. Hempel still:									
Gasoline	.739	60.0	12.0	.39	1.0	2.5	8.30	5.5	8.31
Kerosene	.828	39.4	16.5	1.00	4.5	1.0	....	...	...
Gas oil and lub oil	.896	26.4	14.0	2.68	10.0	1.5	20.10	8.0	21.36
Residuum	1.034	5.7	52.5	5.10	71.0	...	.....	...	.....
Coking distillation in 2-gallon still:									
Gasoline	.739	60.0	12.0	.39	1.0	2.5	8.30	5.5	8.31
Kerosene	.828	39.4	16.5	1.00	4.5	1.0	....	....	...
Cracked distillate	.865	32.1	44.0	2.48	29.0	6.5	17.98	31.0	19.31
Coke	....	....	17.5	6.23	29.0	...	....	....	....
Rerunning cracked distillate in 500 c.c. Hempel still:									
Cracked tops	.785	48.8	10.0	2.07	5.5	3.0	2.51	2.0	...
Cracked gas oil and lub oil	.895	26.6	29.0	2.59	20.0				
Residuum	.985	12.2	2.0	3.22	1.5	...	....	...	...

TABLE 2
Distillation of Fuel Oil, Extracted Oil, and Asphalt

Fraction—	Sp. Gr.	°A.P.I.	Weight Pct.	Sulphur Pct. in Cut	Pct. of Total Sulphur	Gas: Weight Pct.	Sulphur Pct. in Gas	Pct. of Total Sulphur
Fuel oil	.965	15.1	100.0	4.13	100.0	...	.....	...
Extracted oil	.929	19.2	67.5	3.40	44.5	...	.....	...
Asphalt	1.015	7.9	32.5	5.66	55.5	...	.....	...
Fuel oil—analytical distillation in 500 c.c. Hempel still:								
Kerosene	.828	39.4	19.5	1.00	4.5	3.0	13.05	9.5
Gas oil and lub oil	.896	26.4	16.0	2.68	10.5			
Residuum	1.034	5.7	61.5	5.10	76.0	...	.....	...
Extracted oil—analytical distillation in 500 c.c. Hempel still:								
Kerosene	.825	40.0	10.5	1.61	3.5	3.5	6.46	4.9
Gas oil and lub oil	.893	27.0	17.0	2.43	8.0			
Residuum	1.018	7.5	36.5	4.08	29.0	...	.....	...
Fuel oil—coking distillate in 2-gallon still:								
Cracked distillate	.855	32.1	71.0	2.10	36.0	9.0	15.58	34.1
Coke	....	....	20.0	6.23	30.0	...	.....	...
Extracted oil—coking distillate in 2-gallon still:								
Cracked distillate	.843	36.4	57.5	2.50	28.0	2.5	19.90	9.5
Coke	....	....	7.5	5.13	7.5	...	.....	...
Fuel oil—rerunning cracked distillate in 500 c.c. Hempel still:								
Cracked tops	.811	43.0	31.0	1.42	10.5	3.5	3.61	2.8
Cracked gas oil and lub oil	.895	26.6	34.0	2.59	21.5			
Residuum	.985	12.2	2.5	3.22	2.0	...	....	...
Extracted oil—rerunning cracked distillate in 500 c.c. Hempel still:								
Cracked tops	.787	48.3	25.0	1.38	6.5	1.0	2.39	0.8
Cracked gas oil and lub oil	.884	28.6	29.5	5.61	15.0			
Residuum	.985	12.2	2.0	4.54	2.0	...	....	...

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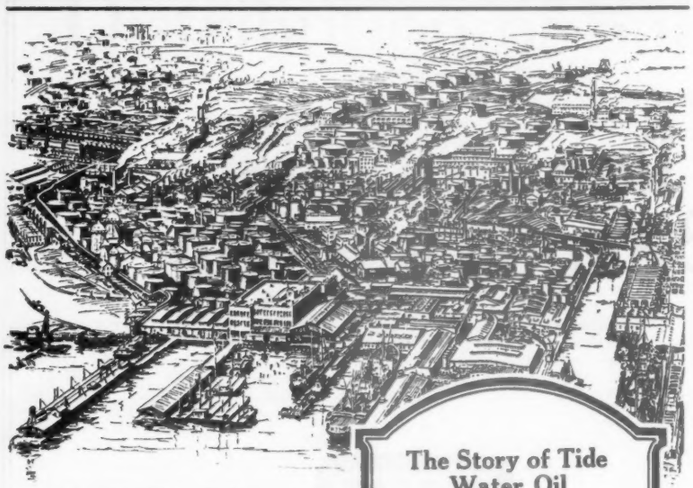

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EASTERN REFINED OIL MARKET MORE OPTIMISTIC AS CONDITIONS IMPROVE

By N. O. Fanning

NEW YORK, April 21.—A marked change for the better in weather conditions during the past week was reflected in greatly increased consumption of gasoline and lubricating oil. This has brought about a more optimistic feeling in oil trade circles, because it bears out indications that with average good weather this year, consumption will reach a new high record.

Stocks have been rapidly piling up at eastern plants, especially of gasoline. There has been a general increase in refinery operations and eastern refiners have been moving a record amount of raw material in in preparation of a record year. If this year does not turn out well in the oil business, the big oil men in this section will have made grave miscalculations.

The progress made by the reparations commission and the more reasonable attitude taken by the chief European nations toward each other is expected to be reflected in a record export demand for oil. Industrial operations are expected to speed up greatly, which will not only cause a bigger demand for lubricating oils, but will bring greater employment and prosperity abroad, and this will be reflected in the expansion of the use of motor vehicles, in the opinion of prominent oil export trade authorities.

It may be necessary to have a little patience before a real upturn in oil may come, but it is the growing opinion among the higher oil officials that prosperity is now on the way.

Gasoline Soft

There was a slight yielding in the bulk gasoline quotation in this territory during the week, despite increased business. Mid-Continent gasoline (New Navy) was available in comparatively small quantities at 15 to 15½ cents per gallon. It is pointed out that offerings of Mid-Continent gasoline have been unusually small this year, which is believed here to reflect caution on the part of refiners in that territory, who still fear a repetition of last year's demoralized conditions if production is speeded up to any degree. In other words, the Mid-Continent is "standing pat," waiting to see how the consumption of gasoline is going before increasing their production schedules.

Stocks in Strong Hands

Many oil men point to the large stocks of gasoline and crude oil on hand, as compared with former years, in putting forth the opinion that the trade is not in a sound condition. Those close to the markets, however, realize that any unsound position would be reflected in an anxiety to dispose of production. Distress offerings of gasoline are certainly not conspicuous in this territory. If stocks were over large, this would not be the case. The fact is that although stocks are larger than ever, they are in strong hands.

This is not a particularly bright situation as far as the smaller refiners are concerned, as any increase in offerings on their part could be met by increased competition on the part of the larger concerns, who hold the big stocks.

Export Trade Less Active

The feature of the export markets was a decline of one-half cent per gallon in the price of all grades of export kerosene at New York, except that delivered in cases, which was reduced one-quarter of a cent.

For the second week in succession the tanker chartering market was inactive, indicating a let-up in the export business. This was to be expected after the record movement which continued throughout the early months of the year.

Big Purchases of Gulf Oil

During the week crude and refined oil was brought in to Atlantic ports from the Gulf Coast at a high record rate of 297,000 barrels daily, a gain of 117,000 barrels over the preceding week. Receipts from California, on the other hand, dropped to a new low for many months of 103,000 barrels daily, a decrease of 98,000 barrels. Receipts from Mexico and Peru showed an increase to 173,000 barrels daily, a gain of 52,000 barrels over the week before.

This clearly indicates the trend of events. The southeastern fields are being relied on more and more in place of those of California in supplying eastern refinery and market requirements.

The following table shows estimated daily average receipts of crude and refined oil at Atlantic Coast ports by water from the Gulf and Pacific coasts of the United States, and imports, for the last two weeks; also monthly record since January 1, 1924 (figures in barrels):

	Week Ended	
	Apr. 18	*Apr. 11
Gulf Coast	297,000	180,000
Pacific Coast	103,000	201,000
Mexico, etc.	173,000	121,000
Total	573,000	502,000

*Monthly Record (Daily Average)

	Gulf	Pacific	Imports	Total
March	201,000	137,000	130,000	468,000
February	174,000	175,000	108,000	457,000
January	127,000	159,000	79,000	365,000

*Revised.

SINCLAIR 1923 REPORT REFLECTS DISTURBANCE

NEW YORK, April 21.—Unsettled conditions in the oil industry last year are blamed by the Sinclair Consolidated Oil Corp. for a drop of about $17,500,000 in net earnings to $13,436,504. With dividends and reserves deducted, there was an actual deficit of $11,831,220, contrasted with surplus of $10,228,266. Gross earnings totaled $107,592,665, approximately $23,500,000 less than in 1922 but the company reported that despite demoralized markets it sold a larger volume of products.

Larger expenditures for increasing refining and marketing facilities made in 1922 and 1923, but not productive in those years, offer prospects for profits in 1923, Chairman Harry F. Sinclair reported to stockholders. The disturbance in the oil industry, he said, has not entirely subsided, but much more favorable conditions exist and present indications are for continuing improvements. In referring to the suit to cancel the Teapot Dome lease, he asserted the company awaited the result with entire confidence.

Mr. Sinclair announced the only new development the company's foreign explorations was an increase in its holdings in the Angola enterprise, on which preliminary reports were encouraging. The report says that the Sinclair Crude Oil Corp. holds 41,000,000 barrels of crude oil which has increased in value $30,000,000 since December 31, and the Sinclair Corp. owns one-half the purchasing company's stock.

DEER CREEK PIPE LINE

DEER CREEK, Okla., April 21.—A charter has been granted to the Deer Creek Pipe Line Co., capitalized at $250,000, composed of R. C. Jones and E. J. Blank of Cushing and E. C. Mullendore of Cleveland. An 8-inch pipe line will be laid to transport gas from the new gas field at Deer Creek to Enid, Okla., to furnish gas to that city. Work will start at once. Headquarters of the new concern are in Cushing.

ENLARGE LONG BEACH REFINERY

LONG BEACH, Cal., April 21.—The United Oil Co. is installing two new compressors to aid in handling 10,000,000 cubic feet of gas daily from two Signal Hill leases. As a result of the new compressors, the output of the plant operated by the company should be increased from 1,700 to 3,000 gallons. The additional equipment is expected to be in operation by May 1, according to company officials.

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Gravity.....Not below 76°Be.
Not above 82° Be.
E. P.....Not over 375°F.
Recovery...Not less than 85%

GRADE "C"
Gravity.....Not below 80°Be.
Not above 88° Be.
E. P.....Not above 350°F.
Recovery...Not less than 78%

GRADE "D"
Gravity.....Not below 88°Be.
Not above 92°Be.
E. P.....Not above 350°F.

GRADE "1"
Gravity.....Not below 58°Be.
Not above 62°Be.
E. P.....Not over 437°F.
Recovery...Not less than 91%

GRADE "2"
Gravity.....Not below 58°Be.
Not above 62°Be.
E. P.....Not over 450°F.
Recovery...Not less than 90%

GRADE "3"
Gravity.....Not below 64°Be.
Not above 66°Be.
E. P.....Not over 440°F.
Recovery...Not less than 88%

GRADE "4"
Gravity.....Not under 66°Be.
Not above 70°Be.
E. P.....Not over 435°F.
Recovery...Not less than 85%

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DEMAND LARGER; SUPPLY ADEQUATE

No Talk Now of Runaway Market in Chicago Territory as Distributors Believe Prices Will Remain Fairly Stationary. Consumption Increase Not As Large As Had Been Expected

By John B. Waldo

CHICAGO, April 21.—The gasoline demand showed considerable improvement during the past week, but it has not been large enough or continued long enough to give real strength to the market here. The indications as to a larger demand in the very early future imply a higher price but every day there is someone to offer gasoline at the lowest price of the market in sufficient quantities to prevent any advance to higher quotations. One and possibly several concerns have been offering New Navy gasoline in considerable quantities at 10½ cents to marketers and in at least one instance to jobbers and distributors. The price is a distress price as is shown by the fact that the sales are for cash which is evidence of the cause for the offering. The concern selling at this price is financing the operation of a refinery and apparently has found the sales too slow for its plans.

There is something of a change in the opinion of the local industry as to the situation during the last couple of weeks and more and more the prediction is heard that the industry is drifting into the same condition as a year ago. There has been a slowing up of consumption during the months of January to April. This was not noticed so much by refiners during January for then the distributors were filling their tanks in expectation of higher prices but, with the jobbers' tanks once filled, the waiting for orders began and during much of the time business has been remarkably dull in all branches. The refiners could not or would not see the necessity for reducing their output and the stocks of gasoline seem perhaps larger than they are by comparison with last year considering the number of cars registered.

No Talk of Runaway Market

There is no talk now of a runaway market as there was early in the year, or of materially higher prices. Few care to predict an advance in the tank wagon and service station prices of more than 2 cents. Many believe that 20 cents tank wagon will be the limit of prices this season. They may be right but it is very difficult to prophesy regarding prices in the oil business. It is one thing today and quite a different condition when the mail is opened the next morning. Refinery prices, all agree, should be and must be higher and the general idea is that the better established jobbrs would be willing and even glad to see the refinery prices advanced even without a tank wagon advance. These jobbers know that there is no money in the refining business at present refinery prices.

The demand for gasoline is all for the New Navy grade except in the matter of a few orders for the summer gasoline and a little business in the higher gravities, chiefly from concerns that specialize on a high test gasoline. The bulk of the business has been done at 10¾ to 11 cents to the trade with marketers occasionally letting a little go at 10½ cents. Earlier in the week when the increase in the demand seemed to promise a much improved condition there was little gasoline offered the jobber at under 11 cents. The marketer tried to get the 11 and if the jobber would not then the prices was the ⅞ and finally the ¾ but a large part of the spot business was then done at 11 cents. Then came reports of a weaker market in Tulsa and of offers to sell at 10½ cents and the business during the latter part of the week was divided between the 10¾ and the 11-cent prices. One company was holding out for 12 cents but it needed all it had for its own distribution and its customers and it is easy to be firm in quoting with little to sell. The demand for blends is light and the natural gasoline is not moving here to any amount.

Kerosene Is Firm

Kerosene has been in large demand and prices are firm at the top. One large operator stated that he paid this week three-eights of a cent more for kerosene than he did two weeks ago and this is just about the increase in the market—from 4⅛ to 4½ cents. Refiners within reaching distance are without free stocks of kerosene and in reply to wires sent to all the unanimous answer was that they were sold out. Some of the marketers have supplies due them and they are selling, presumably at a good profit. Just what has caused the demand beyond a genral stocking up is a matter that no one is able to state definitely. There is some talk of the tractor demand, but this is not really a large demand. The old fashioned kerosene lamp consumes much more kerosene than the tractor and will for years to come. The demand is from all directions and from towns and cities as well as from the agricultural districts although the bulk of it is going to sections in the farming community. There was a report of large purchases by the Sinclair organization but this was denied. The action of the eastern exporters in reducing the export price of kerosene did not fit in very well with the situation here and the impression was quite general that the demand was not likely to last long and that once the jobbers were stocked up there would be an easier market, if not in prices at least for supplies.

Fuel Oil More Firm

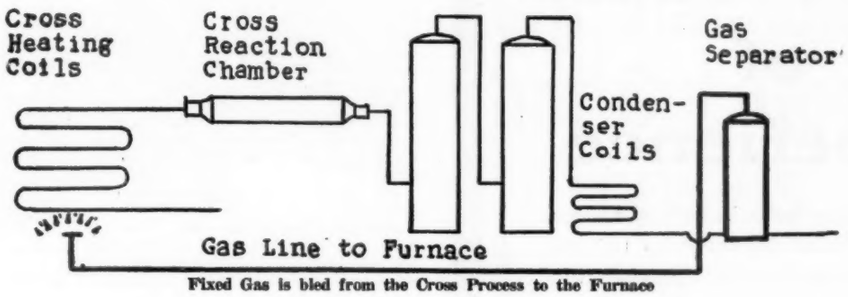
Fuel oil has been rather more firm. The offers at reduced figure from North Texas have been withdrawn and the quotations from that source are in line with the Group 3 prices. The demand from the industries is rather of a hand to mouth order. The manufacturers generally seem to look on the future with some misgivings. The Illinois Manufacturers' Association, a very strong and active body, recently reported that when the Mellon bill for reduced taxes was first up before Congress the industries were reviving, but since the changes in the bill had taken away the prospects of relief from industrial taxation there had been a gradual decline in business. There may be something in this and it may be the caution due to the fact that this is election year with the outlook very doubtful, but it may be all on account of the bad weather which has kept the farmers from tinding and made it desirable for the salesmen to return from the road. The railroad demand is very large and the roads are buying in excess of their consumption which is easily accounted for on the theory of possible advances in prices and a larger consumption during the coming summer. The present price range is around $1.00 with business done at a little less in some instances and very difficult to prevail on buyers to pay any more.

Gas oil is still very quiet here. The present value of gas oil, judged by the price at which it can be sold is $1.26 a barrel with light fuel oil selling at $1.10 to $1.15. This makes the price of gas oil seem altogether too low.

Refineries Handle Road Oil

The bulk of the road oil business is being done direct from the refineries this year, at least several of the refineries have their own road oil or asphalt departments which seek the orders for this class of material and the Chicago offices are not handling the business. The demand to date has not been as

The Fuel Consumption of the Cross Process



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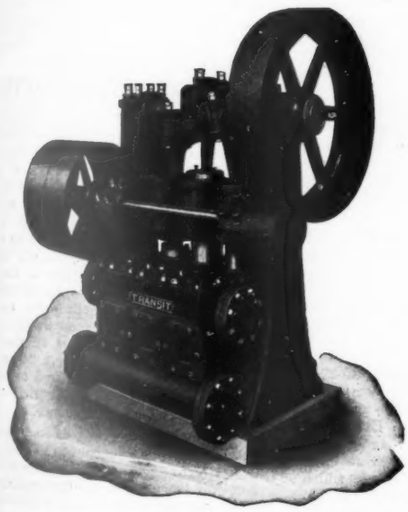

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HR-233

large as usual to the time of year. The market seems a little easier as to prices. Most of the orders in this territory so far have been taken by the Standard, Roxana and the Indian Refining Co.

Lubricating oils are moving on contracts in a satisfactory manner but the refiners here report the new business as only fair. Prices are firm and on bright stocks and steam cylinder stocks the supplies are light and the tendency is upward. Compounders report a good movement and state that the last 2 weeks have shown a decided gain in business. There is a good export movement which, with the domestic demand, is keeping stocks light and there is little accumulation of any grade. The outlook for the summer season is considered very favorable.

The Standard Oil Co. (Ind.) reported no changes in its tank wagon or service station prices during the week. There is much less talk of declines or advances and the general expectation is that the present price structure will be maintained for some time unless somthing happens that is unexpected, such as a sudden reversal of the supply and demand. There are local outbreaks of price cutting but in small and unimportant places as a rule. The local consumption over the week ends is becoming of mid-summer proportions.

NEW GASOLINE PLANTS BUILDING IN STROUD

Gasoline plant construction in Oklahoma has kept pace with the development of new production and the further development of the older fields. In the new Stroud area of Lincoln County two plants are being built to care for the gas now being produced from the few wells recently completed. Hull & Terrell are finishing a plant which is expected to start up May 1 with four 90-horsepower units operating. It will be a low-pressure absorption type and will handle 3,000,000 feet of gas at the start. Two additional 165-horsepower units are being planned and others will be added as the field is developed. The plant will be located on the J. A. Hull Oil Co. lease in Section 12-14-6. An eight-car loading rack has been built on the Frisco line, a mile east of Stroud.

The Roxana Petroleum Corp. expects to have four 165-horsepower units in operation in its new Stroud plant about June 10. This plant will handle about 7,000,000 feet of gas from the Roxana lease in Section 1-14-6. It will be low pressure absorption type also.

The Owen Gasoline Co. has completed its plant near Owen in northern Washington County and will treat about 15,000,000 feet of gas daily. The new plant is located in Section 29-29-13. In the northwest extension to the Burbank Field, the Mid-Kansas Oil & Gas Co. is completing a 4-unit absorption plant in the southeast quarter of Section 15-27-5. It will utilize the gas from the company's lease and other leases in the vicinity.

Near the Tulsa Country Club, the Oklahoma Eastern Oil Co. is putting into operation its new low pressure California type Newton process plant, which can utilize approximately 50,000,000 feet of gas daily by oil absorption. The denuded gas is then furnished to consumers in Tulsa.

FIRST FLOWING WELL AT COTTON VALLEY, LA.

SHREVEPORT, La., April 22.—The first flowing well was completed in the Cotton Valley district, Webster Parish Monday, at a depth of 2,542 feet, top of the pay 2,517 feet. It is estimated between 400 and 500 barrels, gravity 32, and 15,000,000 feet of gas. The well was drilled by the Humble Oil and Refining Co. It is No. 1 Babb, Section 14-21-10, located about 1,000 feet southeast of the discovery well and is flowing into earthen tankage while pipe line arrangement is being made.

Lubricant Stocks On Gulf Coast Are Being Drawn Upon

HOUSTON, Tex., April 21.—Stocks of zero cold test lubricants are lower now than for any time within the past 18 months. This to a large measure accounts for the firmness of the market on these oils. Orders booked for delivery over the remaining days of April indicate that stocks will go even lower than the present figures.

Refiners do not look on the condition as alarming. But it is a fact that reserves are being touched in order to keep pace with orders. From the refiners' viewpoint it is a healthy market. Prices are unchanged from last week, but the tendency is toward strength. Orders are coming freely and the amounts being shipped indicate that jobbers are preparing for brisk business with the opening of the motoring season.

The demand is uniform. With the season considered, all grades of oils are moving freely. The southeastern States, the Middle West and the territory around New York and Philadelphia are drawing on the oils from coastal crudes in the present buying rush. Something of the rush business can be known from the fact that one concern shipped more oil in the first 15 days of April than it shipped during the whole of April last year. This is unusual, but business for the whole coastal area has been much ahead of the corresponding period of last year.

There is a dearth of gas oil in the Houston refining center. The independent plants are sold out for export. One cargo could not be filled early this month because it was impossible to get assurances of the product. Some of the larger plants are holding gas oil for cracking. The gas oil from coastal crude is being cracked for gasoline, often being mixed with the gas oil from Mid-Continent crudes.

Fuel oil has eased off a bit. But the price is still up to the proper level.

WEATHER IMPROVES GASOLINE SITUATION

OIL CITY, Pa., April 21.—With the exception of cylinder stocks and wax the market for petroleum products in the northwestern Pennsylvania area is weak.

The gasoline situation seems to be better than it has been. There is a greater quantity of motor fuel being consumed and shipped. There is still some cheap gasoline to be purchased at the refineries, but it is small in quantity beside what has been offered in other recent weeks. The coming of good weather has brought the automobiles out on the improved roads in large numbers, but more sunny weather will be required to make the travel in the country districts over dirt roads of much consequence.

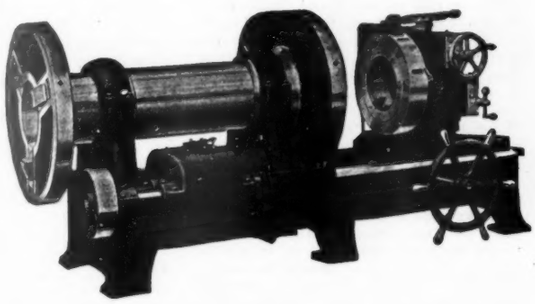
Kerosene is still going down, both in demand and price despite the expectation of the refiners.

Fuel oil is very weak. One reason for this is that the most of the refineries in this district finding their gasoline storage capacity filled, have closed down their cracking plants. Fuel oil will probably remain weak until the refineries start pulling in the fuel oil for cracking purposes again.

Stocks continue to be good. The big fellows are not buying as much as they were but at the same time the demand continues to be good. The demand for filtered stocks has increased.

ARGENTINE OIL OPERATIONS

Six new wells have been completed during recent months in the Rivadavia Field, Argentine Republic. A gusher brought in a week ago is reported to have spouted 4,200 bbls. of oil in two hours and ten minutes, or 32 bbls. a minute.



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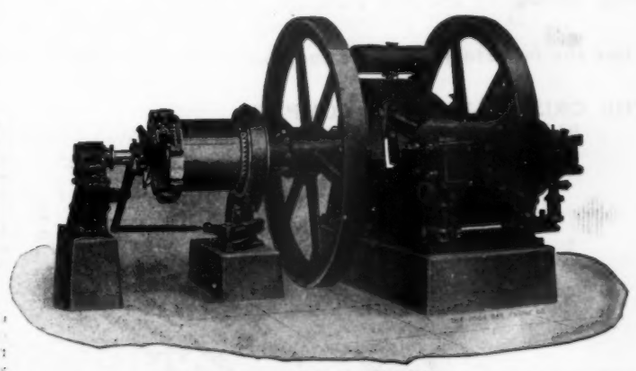

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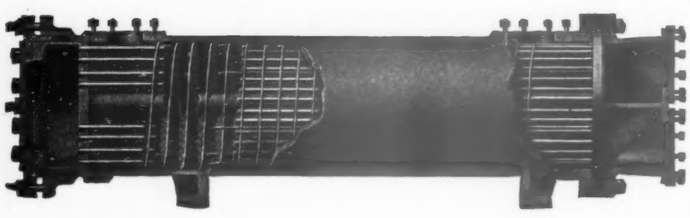

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EASTERN FIELDS

(Continued from Page 56)

A. Moss farms. On Sugar Camp run, New Milton district, Doddridge County, the South Penn Oil Co. has a rig up for a second test on the Frank Kelly farm. In McClelland district, the Carter Oil Co. has a rig completed on the Milton Underwood farm. In Jefferson district, Pleasants County, the Knight Oil Co. is moving a drilling machine on the Josephine Knight farm. On Elk River, Big Sandy district, Kanawha County, J. A. Osborne has the rig completed for a test on the W. D. Roush farm.

Southeastern Ohio Fields

The southeastern Ohio fields did not make as good a showing during the past week as West Virginia. The wells completed were not important as to size or location, most of them located in shallow territory. The new Berea grit development in Section 32, York Township, Morgan County, furnished a fair producer. It is the Daily Oil Co.'s No. 4 on the C. C. Crider farm and good for 40 bbls. a day. The Atha Oil Co.'s No. 8 on the Melick Brothers' farm in Section 16, Madison Township, Perry County, had only a slight show of oil in the Clinton sand. It may be abandoned. In Section 3, Clay Township, Knox County, the A. H. Heisey Co. drilled a test on the Eunice & Eugene Ulrey farm through the Berea grit and dry.

Licking County Completions

In Lot 13, Madison Township, Licking County, W. W. and A. T. Wehrle completed and shot in the Berea grit a second test on the Frank Barnes farm. After standing two days they swabbed 15 bbls. from the well. In the same township and in Licking Township, the same parties are drilling second tests on the J. L. Watson and Charles Ice farms. In Lot 14, Madison Township, the Ohio Fuel Supply Co. has a 3-bbl. pumper in the Berea grit at No. 4 on the L. S. Lake farm. In Lot 9, Hopewell Township, the Carter Oil Co. completed and shot a test on the William T. McInturf farm. It has a good gas pressure but very little oil. The location is 1,500 feet north of the company's test on the Marion Bounds farm.

South of the Village of South Olive, in Section 36, Olive Township, Noble County, Williams & Clark drilled a test on the Thurman Williams farm through the Berea grit. They got no oil and only a little gas. In Section 31, Enoch Township, H. S. Mosely & Co. drilled a second test on the L. W. Morland farm through the 700-foot sand, a small pumper, good for 3 or 4 bbls. a day. In Section 26, Jefferson Township, J. M. Speary & Co.'s No. 8 on the Gertrude & Hensy Arnold farm is dry in the Buell Run sand. This location is only 65 feet northwest of a 5-bbl. pumper on the S. M. Williams farm.

Dusters in Washington County

Washington County's contribution to the completed list are dusters. In Section 23, Lawrence Township, the Ohio Fuel Oil & Gas Co.'s test on the J. L. McFarland farm is dry in the Berea grit. This location is three-fourths of a mile south of the test on the William F. Schramm farm. In Section 19, Liberty Township, Beeson Bailey & Co. completed No. 7 on the J. H. Merrow farm, dry in the second Cow Run sand. In Newark Township, Licking County, the Ohio Fuel Supply Co. is drilling for a Big Lime producer at a second test on the John Gleckner farm. In Perry Township, Coshocton County, Cline Brothers started to drill a test on the W. H. Taylor farm, 5,000 feet southeast of the test on the F. G. Veatch farm. It will be drilled to the Clinton sand.

Week-End Completions

The deep sand territory in southeastern Ohio just got under the wire at the close of the week with a good producer, the only one completed during the entire week. It is located in the southwest quarter of Section 25, Coal Township, Perry County. It is owned by the Kachalmacher estate and is its initial test on the Hemlock Coal Co.'s property. The first 24 hours after completed and shot in the Clinton sand it produced 8[illegible] bbls. It is located 700 feet southwest of the Ohio Fuel Supply Co.'s No. 4 on the Charles Trimmer farm. In Section 28, Rush Creek Township, Fairfield County, the Blum Oil & Gas Co. drilled its test on the W. W. Larimer farm, through the Clinton sand, but they found no oil or gas in any formation. In Section 31, Jackson Township, the Clinton Oil & Gas Co. has started to drill a test on the Turner householder farm. In Newport Township, Washington County, C. O. Clark, Jr. completed a test on the H. C. Rowland farm, dry in the first Cow Run sand. This location is 2,000 feet northeast of the Eddy Oil Co.'s test on the Lulu Eddy farm.

Drilling to Lower Sand

In Section 18, Fallsbury Township, Licking County, the Carter Oil Co. started to drill down to the Clinton sand its test on the J. W. Martin farm. In Section 17, Pike Township, Coshocton County, the Leonard Oil & Gas Co. is drilling down to the Clinton sand in No. 5 on the James L. Ashcraft farm. In Lot 10, Madison Township, Licking County, W. W. and A. T. Wehrle started to drill a second test on the J. L. Watson. The first test is a dry hole.

Southwest Pennsylvania

In Springhill Township, Greene County, the Ayers Oil & Gas Co. completed a second test on the John Ayers farm, dry in all sands. The Harris Oil & Gas Co.'s test on the Charles Lemon farm, in Jackson Township, is a gasser in the fifth sand. In Richhill Township, the Manufacturers Light & Heat Co.'s second test on the H. Jacobs farm found a very light gas when drilled through the Gordon sand. In Aleppo Township, the Cliff Oil & Gas Co. has made a location on the J. W. Anderson farm. In Gilmore Township, the Jollytown Oil & Gas Co. is drilling at 2,500 feet on the Rex Clovis farm. In Springhill Township, the Phipps Drilling Co. is drilling on the John C. Estell farm. In Jackson Township the Davenport Oil & Gas Co. is drilling at 2,400 feet on the Charles Lemon farm. In Center Township, Bell & Co. started to drill on the J. W. Nickels farm. In Aleppo Township, the Manufacturers Light & Heat Co. is drilling on the Della Weimer farm. The same company started to drill on the William & Emma Murray farm. In Perry Township the Peoples Natural Gas Co. is drilling at 3,080 feet on the Jacob Rexner farm.

A duster and a gasser was the southwest Pennsylvania contributions to the completed list at the close of the week. In Richhill Township, Greene County, the Natural Gas Co. of West Virginia got a good gasser at its test on the B. F. McClelland farm, 1 mile southwest of Graysville pump station. In the same Township, the same company completed a second test on the D. A. McCracken farm, a duster.

What is Doing at Deep Wells

The Hope Natural Gas Co.'s deep test on the Joseph Gordon farm, near Terra Alta, Portland district, Preston County, West Virginia, has 10-inch casing set and started to drill again. It has now reached a depth of 2,700 feet and making hole fast, and expects to get the Oriskany sand between 3,400 and 3,500 feet.

On Chestnut Ridge, Westmoreland County, Pennsylvania, near Ligonier, the Peoples Natural Gas Co. is down 6,440 feet in its second test on the Booth-Flinn property. They are having more trouble with a cave. The same company is drilling at 6,723 feet on the Seger Brothers farm and making slow progress.

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OKLAHOMA FIELDS

(Continued from Page 44)

drilling away with several others starting and a number of recent completions accounted for. Deaner & King had a machine in place for No. 1 Grayson, NW cor. SE, Section 5-17-16. Martin and others' No. 1, SE cor. NW SE, Section 9-17-16, was dry at 910 feet. Sewell and others' No. 4 Hawkins, CNL NW SE SW, Section 10-17-16, was considered a 20-bbl. well after a 50-quart shot at 722-32 feet. Johnson and Young shut in their No. 3 Birney, SE cor. NW SE, Section 11-17-16, as a 500,000-foot gasser, from sand at 764-86 feet.

The Livingston Oil Corp. had 100 feet of oil in the hole after a 200-quart shot in No. 2 Birney, NE cor. SW SW, Section 11-17-16. Broken sand was drilled from 753 to 815 feet. Cole and others had a 20-bbl. well after shooting sand at 735-65 feet with 100 quarts in No. 2 Harris, CNL NE SE, Section 12-17-16. The Whaleback Oil Co. and others' No. 5 Berryhill, CWL NW NE, Section 15-17-16, was good for 90 bbls. after a 60-quart shot at 735-60 feet. A. E. Carter's No. 3 Verner, SW cor. NE NW, same section, made 15 bbls. after shooting sand from 745-60 feet with 60 quarts. Martin and others' No. 5 Verner, SE cor. NW NW, section 15-17-16, was finished as a 40-bbl. producer after shooting from 749-63 feet with 100 quarts. Berger & Bonnell abandoned their No. 2 Verner, CEL SW NE, same section, as dry at 854 feet. Weaver and others spudded and shut down at No. 1 Bruner, NW cor. SE SW, Section 22-17-16. Cole and others were drilling at 1,200 feet in a deep test at No. 1 Drew, NW cor. SW, Section 26-17-16. A rig was on the ground for Fuhrman Petroleum Co.'s No. 1 Childers, NW cor. SE, Section 28-17-16.

In the Stroud area, Willis and others had a rig on the ground for No. 2 Townsite, CWL NW SE NW, Section 12-14-6.

In southern Creek County, the Skelly Oil Co.'s No. 2 Colbert, NW cor. SW SE, Section 4-13-8, was flowing 90 bbls. naturally from sand at 3,510-15 feet. The Texas Co.'s No. 1 Samuels, NW cor. SW, Section 5-13-8, was abandoned as dry at 3,522 feet.

Okemah Area

In the Okemah area several wells were making progress. W. K. Snyder was rigging up for No. 3 Fisher, CSL SE NW SE, Section 24-12-10. The Independent Oil & Gas Co.'s No. 1 Nivens, NW cor. SW NW, Section 28-12-10, was swabbing 60 bbls. from sand at 3,124-68 feet. The Texas Co.'s No. 1 Rector, SE cor. NW, Section 36-12-10, made 15 bbls. following an 80-quart shot at 3,005-25 feet. Rigs were up at Harry Fair's No. 5 Thompson, CWL NW NE NE, Section 1-12-11, and W. B. Pine's No. 1 Myers, CSL SE SW, Section 34-12-11. Across the line in Okmulgee County, the Gladys Belle Oil Co. and the Independent Oil & Gas Co. had a rig on the ground for No. 5 Mitchell, CWL SW NW, Section 6-12-12.

In the 11-11 country, Benzman and Smith had a rig up for No. 11 Smith, SW cor. NE NE, Section 11-11-11. The Sinclair Oil & Gas Co.'s No. 1 Smith, SE cor. NE NW, Section 13-11-11, an old well, was showing for 4,000,000 feet of gas at 2,761 feet. The Denver Producing & Refining Co.'s No. 2, SW cor. NW SE, Section 19-11-11, was a rig on the ground. The Carter Oil Co.'s No. 7 Barnett, CEL NW NE, Section 25-11-11, an old well, was making 28,000,000 feet of gas from sand at 2,805-12 feet. In Okmulgee County, Schoenfeld & Brink's No. 5 Hawkins, CSL SE NW, Section 4-11-12, was good for 15 bbls. after an 80-quart shot at 1,524-68 feet.

New Work in Cromwell

From the amount of new work under way in the Cromwell area of Seminole County, operators seem to think this pool will be one of the major producing sections of the State. The Central National Oil Co. was spudding No. 1 Dunn, C SW SE SE, Section 4-10-8. The Pure Oil Co. had a rig on the ground at No. 1 Bruner, C SE SE SE, Section 9-10-8. Burke & Greis had a rig on the ground at No. 1 Brown, C SW SE SW, Section 10-10-8. The Roxana Petroleum Corp. had a rig up for No. 1 Brown and was spudding No. 2 Brown, both in S half SW SW, Section 10-10-8. The same company had a rig on the ground for No. 1 Berryhill, C SE NE NW, same section. Wilcox Oil & Gas Co. was spudding No. 5 Bruner, C NW SW SW, Section 15-10-8, and had a rig on the ground for No. 7 Bruner, C SE SW SW, same section. The Gilliland Oil Co. and others were spudding Nos. 1 and 2 Proctor and were moving in material for Nos. 3 and 4 Proctor in W half NE, Section 15-10-8. The Amerada Petroleum Corp. was building rigs for Nos. 4 and 5 Bruner, in N half SE, same section. Cromwell and others had rigs on the ground for No. 3 and 4 Roberts, NE NE, same section.

The Gessel Drilling Co. was spudding No. 3 Stidham, C NW SE NE, Section 16-10-8. The Superior Oil Corp. had rigs for Nos. 1 and 2 Baker, NE NW, same section. The Cosden Oil & Gas Co.'s No. 2 Willis, SW cor. SE NW, Section 15-10-8, was making 30 bbls. after running the oil string to the top at 3,463 feet. Total depth was 3,464 feet. The same company abandoned the location for No. 1 Bruner, C NE SE NE, Section 17-10-8. The Independent Oil & Gas Co. and others were spudding No. 1 Harjo, C SE NW NE, Section 21-10-8. The Tidal Osage Oil Co. was spudding No. 4 Harjo and had a rig on the ground for No. 6 Harjo, NE NE, same section. Mc Man Oil Co. was spudding No. 3 King, C NE SW NW, Section 22-10-8. Shaffer Oil & Gas Co. was spudding No. 2 Yarbola, was building a rig for a rotary hole at No. 4 Yarbola and had a rig up for No. 5 Yarbola, NW NW, Section 25-10-8. Independent Oil & Gas Co. and others were moving in material for No. 1, C SE SE NE, Section 35-10-8. The Independent Oil & Gas Co. was spudding No. 1 Carolina, C SW SE SE, Section 18-10-9.

Wewoka Pool

The Wewoka Pool developed nothing of an unusual nature. Magnolia Petroleum Co. was moving in material for No. 1 Harrison, C SE SW NW, Section 25-8-8. The Independent Oil & Gas Co. and the Sinclair Oil & Gas Co.'s No. 2 M. Walker, C NE SE SE, Section 29-8-8, was good for 180 bbls. from sand at 3,084-3,122 feet. The Dixie Oil Co.'s No. 5 Long, CWL SW SE NE, Section 29-8-8, was making 45 bbls. on the pump from sand at 3,873-94 feet. The same company had a rig for No. 2 Long, C SE NE SE, same section. The Independent Oil & Gas Co. and the Sinclair Oil & Gas Co. were spudding No. 1 Grayson, C NE SE SE, same section. The Magnolia Petroleum Co. was building a rig for No. 3 Parker, C SE SE NW, same section. The Dixie Oil Co. was spudding No. 2 Long, C NW NW SW, Section 29-8-8.

In Hughes County, the Arkansas Fuel Oil Co.'s No. 1 Brown, C SE SE NE, Section 18-9-9, was estimated as a 200-bbl. well from top of sand at 3,160 feet, cable measurement. It was flowing on an average once every 4 hours. The Glenn Crease Oil Co.'s No. 1, NE cor. NW, Section 20-9-9, made 55 bbls. per hour on a 4-hour gauge from sand at 3,038-47 feet.

In northeastern Kay County, Miller & Treadway were spudding No. 1 Pappan, SW cor. NE, Section 14-28-4e. Further west, the Otstot Development Co. had a rig on the ground for No. 1 Shimp, NE cor. NW, Section 20-29-1e. Schandler and others had a rig for No. 1 Benton, SE cor. SW, Section 2-26-4e. The Maryland Refining Co. had rigs on the ground for No. 1 Crazy Bear, CEL NE SW SW, Section 17-25-2e, and No. 1 Walking Bird, C NE SE, Section 18-25-2e.

In Stephens County the Magnolia Petroleum Co. was moving in a machine for No. 1 Payne, NW cor. SW, Section 19-1n-5w.

In Garvin County, the Magnolia Petroleum Co.'s No. 1 Derdyn, C NE NE SE, Section 18-1n-3w, started at 20 bbls. from sand at 1,598-1,610 feet.

Tillman County was getting wildcat attention. Luffborough and others were spudding at 75 feet in No. 1 Gibson, C SE SW, Section 34-1s-17w.

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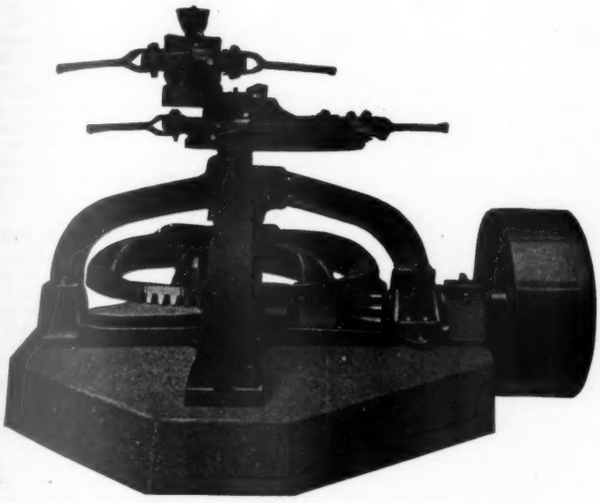

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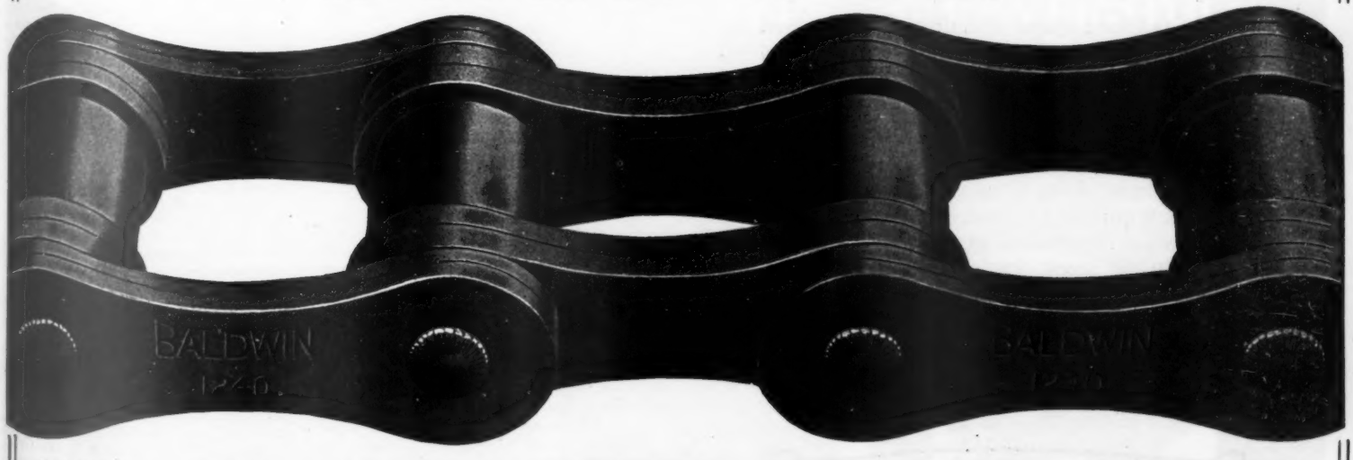

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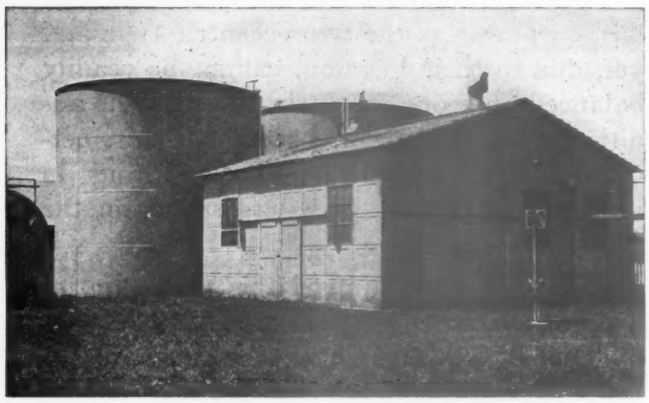

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W. KENTUCKY-TENNESSEE

(Continued from Page 56)

drilled in this pool to date. On the Delond farm, in the same pool, Ed Allen got a 10-bbl. pumper in his No. 1 at a total depth of 488 feet. Shale was found from 225 to 275 feet and the sand from 476 to 486 feet. The importance of this well is that it extends production 1,400 feet to the north of the Lessenberry lease, owned by the Carter Oil Co., and is one-fourth of a mile west of production on the Travis tract of Fred Moore and associates. On the Mansfield place, the Houchins Leasehold Co. scored a good one in its No. 3 at a total depth of 560 feet. Shale was found from 302 to 350 feet. Two sands were encountered, the first from 492 to 503 feet, and the second from 537 to 542 feet. After these sands were each charged with 20 quarts the well responded readily and is estimated at 20 bbls.

On the Harston farm, between Glasgow and Scottsville, Lewis J. Emery, Jr. & Sons completed No. 15 for 5 bbls. at 301 feet.

Owensboro District

In the Hancock-Ohio Field, the week showed 6 completions, with 1 dry, and over a half dozen wells nearing the sand, indicating a rapid increase in development work as warm weather approaches.

The five producing wells just completed have increased the production over 60 bbls. and are spurring the operators to renewed efforts. In the Herbert Schoolhouse section, C. E. Daugherty & Co. finished a well on the schoolhouse lot, producing from both the Jett and Barlow sand at 480 and 729 feet respectively for a 10-bbl. pumper. The Dearborn Oil Co.'s No. 2 Reardon, finishing up in the Barlow sand at 713 feet is good for 8 bbls., while White & Nicklin in their No. 2 Burdette have a strong 20-bbl. well on the jack. In the Pellville district, the Pellville Oil Co. has a 4-bbl. producer on the Brown farm in the Jett sand at 520 feet. The Kentucky Oil Co.'s No. 12 Amanda Stewart was finished dry in the Jett sand. Although a direct offset to the Bailey well of the Leeper Oil Co. and C. F. Rosener, this well failed to show in the shallow pay and while they encountered 20 feet of sand in the deep pay it was hard and barren.

The Hurricane area, which has received 3 or 4 setbacks in the past few months, seems to again be coming into its own with the completion of the No. 1 Casey by the Newton Oil Co. This well which finished at 482 feet, showed 28 feet of fine sand and early estimates place it at a 20-bbl. pumper.

The Pennsylvania-Indiana Oil Co. is drilling at 320 feet on the Abe Howe 45 acres, in the Herbert district, recently purchased from C. E. Daugherty & Co. The Dearborn Oil Co. is spudding in No. 1 Bud Parker, while the Panther Creek Oil Co. is on top of the pay in its No. 6 Bob Miller. Courson, Randolph & Stevenson are pushing ahead with their No. 4 Abe Howe 48 acres, and this should furnish an early completion in the Barlow formation as it failed to yield in the upper sands. Bert Thompson and others are 200 feet on the McDaniels farm, 1½ miles northeast of Herbert schoolhouse. In the Pellville section the Mosley Oil Co.'s No. 1 Ashworth is being delayed with a bad fishing job at approximately 500 feet.

Much Work Planned

In the effort to extend the field much new work is being planned. The most important test to be made within the next few weeks is that on the Oat Neal farm directly south about 2 miles from the Herbert schoolhouse Section. C. A. Leeper and others are moving a rig on this property and will spud in next week. North of Pellville in the Patesville section, C. C. Adams of Howesville representing several eastern capitalists, will commence next week to move a rig for a test on a block of several hundred acres. Two wells will be drilled in this section. The McCombs Producing & Refining Co. which recently drilled a dry hole near Narrows, Ohio County, is planning three tests to the north of the first well and will begin moving a rig as soon as the roads will permit. Representatives of the National Refining Co. were in Owensboro last week looking over a block of 9,000 acres north of Pellville. It is reported that this company will drill three or four wells on this acreage during the coming season.

E. M. Treat & Co. have abandoned their well on the F. Higdon farm in the northeastern edge of Daviess County. The pipe has been pulled and the well plugged. Harry E. Cowling, formerly of Bowling Green, has been in the Owensboro section for the past two weeks looking over the field and reports that he intends to start a well in the near future.

Four Completions in Warren

Warren County showed four completions, the best of which was No. 4 on the W. R. Hunton, drilled by P. H. Levelle, in the new district between Rockfield and Browning. This well pumped 60 bbls. the first 5 hours at a total depth of 1,093 feet. Shale was found from 924 to 1,004 feet. Two sands were encountered, the first from 1,050 to 1,060 feet, the second from 1,070 to 1,090 feet, which were shot with 30 and 60 quarts respectively.

In the Davenport Pool, the Westland Oil Corp. finished its No. 22 C. A. Keller, location No. 36, for 25 bbls. at 1,216 feet. Sand from 1,193 to 1,203 feet was treated to a 60-quart shot.

E. M. Treat & Co.'s No. 9 Ed Bean, offsetting No. 6 Garrett of the Wood Oil Co. to the west, was finished for a light pumper at 1,091 feet. Shale was struck from 900 to 975 feet, and the sand from 1,066 to 1,081 feet. Wells in this northeast extension area seem to be getting lighter and lighter due possibly to the fact that the gas pressure has been weakened.

In the Sandidge Pool, Makeever Bros. got a 12-bbl. pumper in their No. 5 Young, east of the Sandidge and north of No. 4 Young, after shooting the sand from 669 to 684 feet with 60 quarts.

Total depth of the well was 694 feet.

Allen County News

The best well of the week in the Allen County fields was that of the Neil-Hewbring Co., in their No. 4 Kerley, in the new Kerley Pool southwest of Scottsville. After the drill penetrated the sand 2 feet the well filled rapidly and flowed at the rate of 50 bbls. Shale was found from 129 to 172 feet, and the sand was topped at 229 feet. In the same section, Forrest and others' No. 3 Lyles was reported good for 7 bbls. at 240 feet.

Thompson & Co.'s No. 7 D. M. Willoughby, in the Satterfield Pool, made 15 bbls. on power at 407 feet.

Cumberland County

Quite a disappointment was registered in the Bear Creek District of Cumberland County when E. M. Treat & Co.'s No. 2 on the Dickens farm came in dry at a total depth of 1,223 feet, 232 feet below the Pencil Cave. It was only drilled 400 feet east of No. 1, which was finished in February for 222 bbls., naturally at 468 feet.

The wildcat test drilled by Jackson Morris and Less Combest in the Galloway Creek section has been abandoned, according to reports, at around 1,300 feet. It was reported that oil rose to the extent of 100 feet in the hole but not enough to make a commercial producer. These same parties are moving a rig to the Hunter Short lease in the same vicinity.

Another well on the Bud Kerr farm, being operated by the Gartlan estate, features the week in the Kettle Creek district. It was No. 5 on the farm and although not near as big as other completions on the same farm it will add perhaps 25 bbls. per day more to its production. On the Widow Logan tract, the Daniel Boone Oil Co.'s No. 4 was finished dry at 487 feet, one screw below the Pencil Cave.

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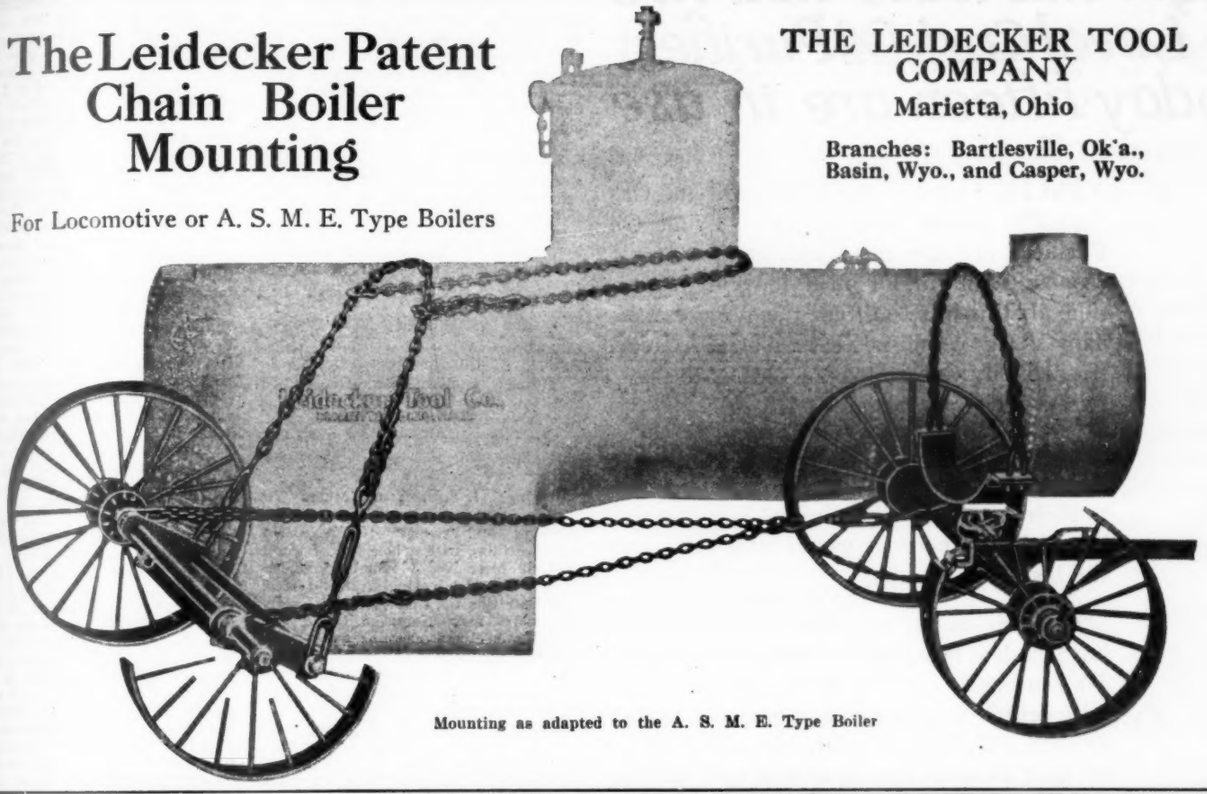

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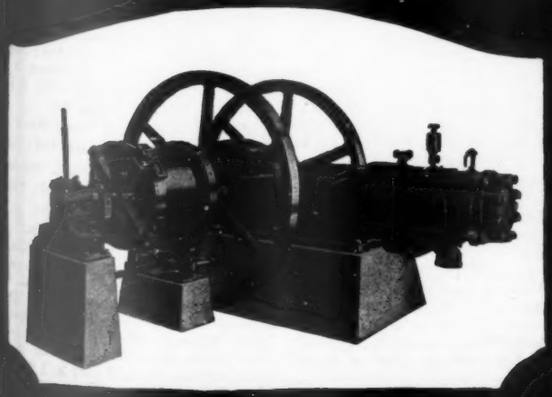

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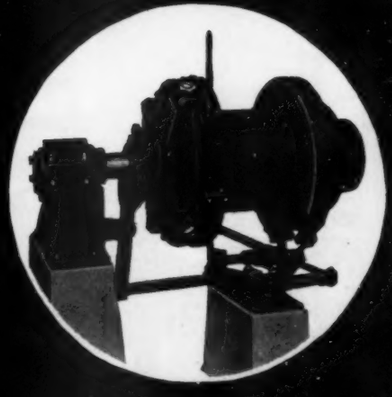
A strong, reliable, self-oiling, quiet running clutch, requiring little or no attention after once installed.

Well constructed—all parts are interchangeable. Lubrication of pulley, bushings and gears automatic and positive in action.

There is no better clutch made for oil field service than the FRANKLIN type "S".

Descriptive bulletins on request



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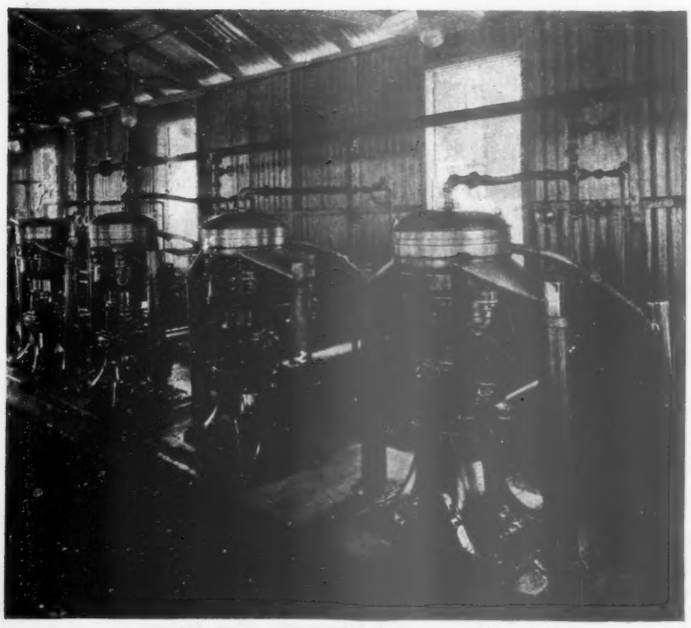

NORTH CENTRAL TEXAS

(Continued from Page 40)

and showing 9,000,000 feet of gas and spraying a little oil from a sand at 4,170 feet; Russell and others' No. 1 Benson, spudding at 105 feet; Seaboard Oil Co.'s No. 4-B Hughes, drilling at 2,600 feet; Shamrock Oil Co.'s No. 2 Glidwell, drilling at 3,300 feet; No. 3 Glidwell, drilling in rock at 2,205 feet; Sims Oil Co.'s No. 4 Lynn, 500 feet of oil in the hole and drilling a sand at 2,537 feet; Smith and others' No. 1-A Benson, drilling at 480 feet; Snyder and others' No. 1 Brenizer, drilling in hard rock at 2,800 feet; Union Oil Co.'s No. 1-A Keathley, drilling in shale at 750 feet; Vance and others' No. 1 Dawes, drilling in mud at 915 feet.

Wildcats

Baylor County—Completions: Cranfill's No. 1 Mills, 30 bbls. at 1,435 feet.

Drilling: Cochran and others' No. 1 Stephens, drilling at 600 feet; Jetter and others' No. 1 Gatski drilling at 650 feet.

Clay County—Completions: Hamilton and others' No. 1 Harper, dry at 800 feet.

Drilling: D'Yarmett and others' No. 1 Bullington, rebuilding the derrick at 340 feet; Gulf Production Co.'s No. 1-A Boddy, drilling with a hole full of water at 3,562 feet; No. 3 Worsham, underreaming 5⅜-inch casing at 3,830 feet; Lone Star Gas Co.'s No. 4 Martin, drilling at 540 feet; Nebraska Oil & Gas Co.'s No. 1 Myers, cleaning out, second shot did not produce any oil, may shoot again a sandy lime at 3,385 feet; Scalling Oil Corp.'s No. 1 Scalling, shut down for 6⅝-inch casing at 1,890 feet.

Montague County—Drilling: Boyd Oil Co.'s No. 1 Salmon, drilling at 530 feet; Gulf Production Co.'s No. 1 Benton, drilling with a hole full of water at 3,525 feet; Mascho Oil Co.'s No. 1 Howard, underreaming 6⅝-inch casing at 2,850 feet; Spencer and others' No. 1 Wilson, drilling at 1,935 feet.

Throckmorton County—Drilling: Ashcraft and others' No. 1 School Land, drilling at 1,050 feet; Adams and others' No. 1 Reynolds, drilling at 810 feet.

Carson County—Drilling: The Texas Co.'s No. 3 Burnett, drilling in blue shale at 2,900 feet; No. 1 Mary Burnett, drilling in lime at 2,330 feet; No. 2 Mary Burnett, fishing for an underreamer at 1,850 feet; American Refining Co.'s No. 1 Burnett, drilling in shale and shells at 1,845 feet; Gulf Production Co.'s No. 3-A Burnett, tubing to pump at 3,145 feet; Silk and others' No. 3 Burnett, fishing for a drill stem at 2,905 feet; Waggoner and others' No. 1 McConnell, drilling at 3,060 feet.

Cottle County—Drilling: Woodley and others' No. 1 Dulaney, drilling at 400 feet.

Hutchinson County—Drilling: Coline Oil Co.'s No. 1 Sandford, pumping 40 bbls. a day at 3,219 feet; Humphreys Oil Co.'s No. 1 Johnson, drilling by a whipstock at 2,585 feet; McGee and others' No. 1 Smith Caspers, cleaning out and showing 30 bbls. of oil a day at 3,175 feet; Watchorn Oil Co.'s No. 1-A Cable, drilling at 2,620 feet.

Gray County—Drilling: Holmes and others' No. 1 Morris, drilling in shale at 2,000 feet; The Texas Co.'s No. 1 Saunders, underreaming 6¼-inch casing at 2,600 feet.

Wheeler County—Drilling: Skelly Oil Co.'s No. 1 Davis, pulling pipe to abandon at 4,490 feet; Tyrell and others' No. 1 Sheldon, drilling in a glass rock at 1,920 feet; Whittington and others' No. 1 Williams, resetting pipe at 2,020 feet.

Stephens County Completions

Completions—Magnolia Petroleum Co.'s No. 4 Brown, 200 bbls. at 3,975 feet; McLain and others' No. 1, Block 72 Breckenridge, dry at 3,175 feet; Swensondale Oil Co.'s No. 30 Swenson, 50 bbls. at 1,785 feet; The Texas Co.'s No. 6 Heathly, 125 bbls. at 3,185 feet.

Drilling—Ablon and others' No. 1 Cunningham, drilling at 1,875 feet; Elinor... Pool Syndicate's No. 2 Douglas, drilling in rock at 2,450 feet; Gray and others' No. 1 Ward, fishing for casing at 3,11... feet; Ivan Petroleum Co.'s No. 2 Martin, is spudding; Little and others' No. ... Walker Caldwell, drilling at 2,110 feet; Mid-Kansas Oil & Gas Co.'s No. 12... Hill, cleaning out at 3,010 feet; No. ... Hill, drilling at 500 feet; No. 2 Low... drilling at 1,715 feet; No. 3 Richardson, fishing for casing at 3,185 feet; Pierce and others' No. 1 Crudington, drilling in brown shale at 2,150 feet; Prairie Oil & Gas Co.'s No. 15 Atkins, drilling at the top of the gray lime and showing some oil at 3,237 feet; Simms Oil Co.'s No. ... Stoker, running 8-inch casing at 2,2... feet; Texas Consolidated Oil Co.'s No. ... Martin, drilling in lime at 3,325 feet; Walker and Caldwell's No. 9 Walker and Caldwell, drilling in blue shale at 2,40... feet; Brown and others' No. 1 McCorney, cleaning out a bridge and showing some water at 3,470 feet; Buckeye Development Co.'s No. 8 Walker, drilling at 1,500 feet; Charter and others' No. ... Langford, drilling in soft rock at 6... feet; Christie and others' No. 3 Humphreys, drilling in hard lime at 3,0... feet; Corts and others' No. 1 Parks, cleaning out at 3,925 feet; Haile and others' No. 2 Jones, drilling without any oil showing at 3,625 feet; No. 5 Jones, running 6-inch casing at 2,770 feet; Humble Oil & Refining Co.'s No. 7 Jones, showing 14,000,000 feet of gas and drilling at 2,525 feet; Little and others' No. 4 Drake, drilling at 1,850 feet; Magnolia Petroleum Co.'s No. 7 Guest, drilling in shale at 500 feet; Mahstedt & Mook Oil Co.'s No. 1 Parks, showing oil and water and fishing for casing at 2,140 feet; Montreal Oil Co.'s No. 4 Henderson, running 12½-inch casing and cleaning out at 900 feet; Oakwood Oil Co.'s No. ... Thompson, drilling a water sand and running 8-inch casing at 2,020 feet; Prairie Oil & Gas Co.'s No. 8-C Veale, drilling at 1,850 feet; Roesser and others' No. 6 Jones, drilling in shale at 2,20... feet; Scott and others' No. 1 Bailey, drilling at 1,120 feet; States Oil Corp.'s No. 1 Hall, drilling at 300 feet; No. ... Williams, fishing for a bailer at 1,65... feet; Swensondale Oil Co.'s No. 1 Herrington, running tubing at 3,350 feet; No. 29 Swenson, fishing for tools at 3,2... feet; The Texas Co.'s No. 14 Gholson, drilling at 515 feet; No. 7 Heathley, drilling by 6-inch casing at 2,605 feet; No. 1 Jones, mudding off 6-inch casing at 2,850 feet; No. 32-A Parks, drilling at 2,440 feet; Texas Fidelity Oil Co.'s No. 1 McCleskey, drilling by 10-inch casing at 1,080 feet; Texas Pacific Coal & Oil Co.'s No. 4 Gardenshire, spudding.

Eastland County Completions

Completions—Brothers Oil Co.'s No. ... Westmoreland, 30 bbls. at 2,875 feet; Mogul Oil Co.'s No. 1 Earnst, 1,000,000 feet of gas at 1,520 feet; Panhandle Oil & Refining Co.'s No. 14 Hightower, 40 bbls. at 1,215 feet; Rosenfield and others' No. 3 Gilbert, dry at 485 feet; Schoonmacker and others' No. 3 Gilbert, 5 bbls. at 495 feet; The Texas Co.'s No. 8 Hightower, 10 bbls. at 1,215 feet.

Drilling—Ablon and others' No. 1 Harris, drilling in shale at 2,000 feet; Bakley and others' No. 5 Wright, spudding; Clayton and others' No. 1 Cole, drilling at 475 feet; Dyer Brothers' No. 2 Harrell, drilling in a dry sand at 2,805 feet; Gallagher and others' No. 1 Graham, drilling in rock at 300 feet; Gholson and others' No. 3 Shugart, drilling at 1,... feet; Higgins and others' No. 1 Rhyne, drilling at 200 feet; Kirk & Brewer's No. 1 Shugart, drilling in shale at 80... feet; Lobaugh and others' No. 1 Holcomb, drilling in hard rock at 1,300 feet; Knox-Lewis' No. 4 Edison, drilling at 500 feet; Magnolia Petroleum Co.'s No. 5 Edison, spudding; No. 5 Ross, drilling in blue shale at 1,400 feet; No. 16 Westmoreland, spudding; Mook Oil Co.'s No. 2 Sibley, fishing job at 3,304 feet; Panhandle Oil & Refining Co.'s No. 15 Hightower, drilling in shale at 500 feet; States Oil Corp.'s No. 13 Harrell, drill...

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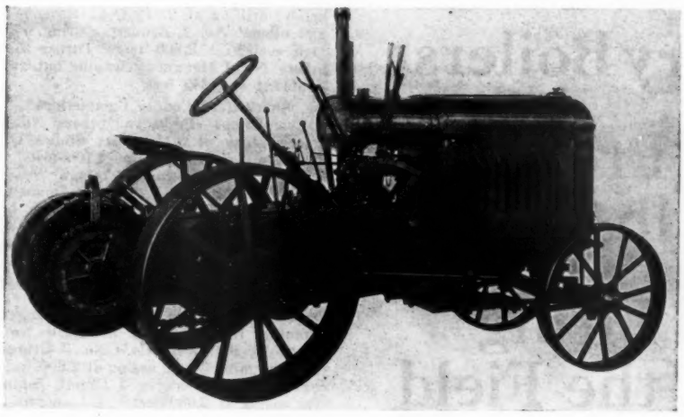
with rope speeds on drum from 100 to 600 ft. per minute forward and reverse; and for heavy pulls, chain drive to bull wheel. You can do heavy or light work slowly or rapidly, without gear shift.



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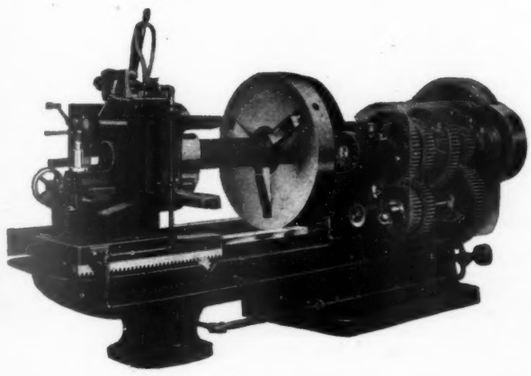

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ing a dry sand at 3,620 feet. No. 1 Radford, fishing at 3,390 feet; Shannon and others' No. 2-A Neill, drilling at 400 feet; Williams and others' No. 1 Fox, spudding; Wright and others' No. 1 Poe, fishing at 485 feet; Beckett and others' No. 1 Hatton, drilling in blue shale at 2,010 feet; Clayton and others' No. 1 Amis, spudding; Daugherty and others' No. 1 Johnson, fishing job at 3,645 feet; Dixie Oil Co.'s No. 1 Connelley, drilling at 2,010 feet; Rosenfield and others' No. 1 Brunett, setting 6⅝-inch casing at 2,200 feet; Turner and others' No. 1 Harwood, cleaning out and swabbing at 3,345 feet.

Shackelford County Completions

Completions—Beggs and others' No. 1 Parrish, dry at 2,110 feet; Simms Oil Co.'s No. 1 Elliott, dry at 4,100 feet.

Drilling — Brown and others' No. 1 Moberly, drilling at 1,255 feet; Donnelly and others' No. 1 Brooks, drilling by 6-inch casing at 2,660 feet; Ellsing and others' No. 1 Poindexter, fishing for tools at 2,150 feet; Landreth Oil Co.'s No. 3 Brazelle, drilling by 6-inch casing at 2,630 feet; No. 2 Lynch, drilling in rock at 2,625 feet; No. 1-B Poindexter, running 10-inch casing at 1,410 feet; Magnolia Petroleum Co.'s No. 3 George, underreaming 6-inch casing at 2,600 feet; Sarver and others' No. 1 Elliott, fishing for casing at 2,600 feet.

Palo Pinto County

Completions—Texas Pacific Coal & Oil Co.'s No. 145 Stuart, 55 bbls. at 1,615 feet.

Drilling — Lowe and others' No. 1 Chenault, showing 75 bbls. of oil and 200 bbls. of water a day from a sand at 779 feet. Upham and others' No. 1 Upham, drilling at 780 feet; Wheeler and others' No. 1 Wheeler, fishing for tools at 3,700 feet; Harris and others' No. 1 Weldon, drilling at 4,280 feet; Hess and others' No. 1 Coker, cleaning out after a shot at 3,705 feet; Moore and Snebold's No. 2 Boles, drilling in shale at 2,585 feet; Texas Pacific Coal & Oil Co.'s No. 8 Robinson, underreaming 8-inch casing at 1,075 feet.

Erath County

Completions—Flick and others' No. 1 Roberts, dry at 750 feet.

Drilling—Marshall and others' No. 1 Martin, drilling in hard rock at 900 feet; Paschell and others' No. 2 Laney, fishing at 2,645 feet.

Callahan County

Completions—Dutton and others' No. 3 Cathey, 40 bbls. at 1,780 feet.

Drilling—Burleson and others' No. 2 Isenhour, showing 25 bbls. of oil daily and underreaming at 1,768 feet; Dutton and others' No. 2 Mrs. Cathey, cleaning out and swabbing at 1,760 feet; Junior Oil Co.'s No. 2 Surles, drilling at 450 feet; Moore and others' No. 1 Anderson, underreaming at 1,575 feet; Seaboard Oil & Gas Co.'s No. 1 Eisenhour, drilling at 1,880 feet; Schaffner and others' No. 2 James, 600 feet of oil in the hole and drilling in a lime formation at 2,540 feet; Urban and others' No. 1 Clinton, underreaming at 2,150 feet.

Mitchell County

Completions—Carey and others' No. 1 Morrison, 200 bbls. at 3,120 feet; California Co.'s No. 5 Abrams, 60 bbls. at 3,100 feet; same company's No. 5 Morrison, 95 bbls. at 3,080 feet; same company's No. 2 Lesure, 75 bbls. at 3,110 feet.

Drilling — Sloan and others' No. 3 Smart, drilling at 1,790 feet; No. 4 Smart, drilling at 1,290 feet; No. 5 Smart, spudding. California Co.'s No. 1 Morrison, waiting on cement to set at 4,500 feet; No. 1 Blutler, drilling in rock at 2,745 feet.

Brown County

Completions—Canyon Oil & Gas Co.'s No. 2 McDonough, 75 bbls. at 1,315 feet.

Drilling — Brooks and others' No. 1 Byrd, spudding. Hart and others' No. 1 Moore, drilling in shale at 1,200 feet; McMurray and others' No. 1 Newlen, drilling in brown shale at 685 feet.

Reagan County

Drilling — Dunning and others' No. 1 Sawyer, is a rig; Associated Oil Co.'s No. 1 University, drilling at 2,580 feet; Big Lake Oil Co.'s No. 4 University, drilling at 2,685 feet; No. 5 University, drilling at 2,610 feet; No. 6 University, drilling at 2,800 feet; No. 7 University, drilling at 1,720 feet; No. 8 University, drilling at 825 feet; No. 9 University, drilling at 450 feet; No. 10 University, drilling at 1,780 feet; Mid-Kansas Oil & Gas Co.'s No. 1 McIntosh, drilling at 325 feet.

Coleman County

Drilling — Robertson and others' No. 18 Robertson, drilling in rock at 1,700 feet; Sun Flower Petroleum Co.'s No. 1 Gates, drilling in shale at 1,100 feet.

PRODUCTION REPORT

Week Ending April 17, 1934

Burkburnett	
American Refining Co.	210
Barkley & Meadows	1,515
Humble Oil & Ref. Co.	545
Gulf Production Co.	1,350
Magnolia Petroleum Co.	3,410
McMahon Oil Co.	445
Panhandle Refining Co.	400
Sinclair Oil & Gas Co.	55
The Texas Co.	675
Texhoma Oil & Ref. Co.	535
Miscellaneous	11,210
Total	20,350
Electra	
Empire Gas & Fuel Co.	1,200
Humble Oil & Ref. Co.	155
Griswold Oil Co.	375
Gulf Production Co.	900
Magnolia Petroleum Co.	4,410
McMahon Oil Co.	200
Panhandle Refining Co.	35
The Texas Co.	4,700
Texhoma Oil & Ref. Co.	2,000
Miscellaneous	5,385
Total	19,350
Iowa Park, Etc.	
American Refining Co.	30
Griswold Oil Co.	30
Gulf Production Co.	40
Panhandle Oil & Ref. Co.	80
Texhoma Oil & Ref. Co.	110
Miscellaneous	2,600
Archer County—	
American Refining Co.	155
Empire Oil & Gas Co.	1,235
Griswold Oil Co.	1,405
Gulf Production Co.	220
Humble Oil & Ref. Co.	105
Panhandle Oil & Ref. Co.	85
The Texas Co.	1,130
Texhoma Oil & Ref. Co.	2,900
Miscellaneous	21,560
Petrolia—	
Gulf Production Co.	55
Magnolia Petroleum Co.	95
The Texas Co.	90
Miscellaneous	85
Total	33,810
Stephens County	
Empire Gas & Fuel Co.	135
Gulf Production Co.	1,730
Humble Oil & Ref. Co.	1,810
Magnolia Petroleum Co.	700
Mid-Kansas Oil & Gas Co.	1,930
Prairie Oil & Gas Co.	930
Sinclair Oil Co.	215
The Sun Co.	665
The Texas Co.	2,235
T. & P. Coal & Oil Co.	1,635
Miscellaneous	7,765
Total	19,770
Eastland County	
Gulf Production Co.	680
Humble Oil & Ref. Co.	170
Magnolia Petroleum Co.	666
Panhandle Refining Co.	910
Prairie Oil & Gas Co.	790
Sinclair Oil Co.	635
The Texas Co.	690
T. & P. Coal & Oil Co.	870
Miscellaneous	3,065
Total	9,405
Other Fields	
Strawn—	
T. & P. Coal & Oil Co.	860
Miscellaneous	650
Moran—	
Empire Gas & Fuel Co.	105
Humble Oil & Ref. Co.	945
The Texas Co.	195
Texhoma Oil & Ref. Co.	190
Miscellaneous	2,370
Coleman County—	
Miscellaneous	105
Brown County—	
Miscellaneous	370
Comanche-Eastland—	
Humble Oil & Ref. Co.	390
Magnolia Petroleum Co.	1,100
Prairie Oil & Gas Co.	225
Sinclair Oil & Gas Co.	65
The Texas Co.	270
T. & P. Coal & Oil Co.	200
Miscellaneous	6,065
Young County—	
Gulf Production Co.	100
Sinclair Oil & Gas Co.	490
Panhandle Refining Co.	335
The Texas Co.	115
Miscellaneous	3,665
Mitchell County	1,225
Reagan County	100
Jack County	40
Scurry County	30
Carson County	990
Hutchinson County	20
Total	20,685
Total this week	130,900
Total last week	133,400
Gain	2,500

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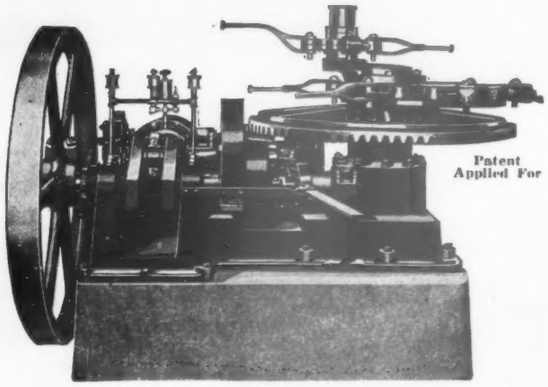

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"PATTIN POWER"

N. LOUISIANA-ARKANSAS

(Continued from Page 36)

15-16. No. 1 Berg was drilled by Shallcross and Whittiken; White and others have rig up for No. 3 Watts, Section 30-15-16; Wingfield and others are bailing to test No. 3 Fincher, Section 29-15-16, and the same at 2,280 feet in No. 2 Smith, Section 36-15-17.

The Wonder State Oil Co. set 10-inch casing at 65 feet in No. 2 Anderson, Section 23-15-17.

A summary of operations in this field last week showed 16 wells waiting on standard rig; 5 temporarily abandoned; 81 drilling; 15 rigged up; 35 derricks and 2 locations.

Stephens Field—Ouachita County Area

Morgan-Pride Syndicate set 10-inch casing at 100 feet in No. 1 Green, Section 22-15-19. The Ohio Oil Co. is setting liner to test 26 feet of broken sand and sandy shale at 2,210 feet in No. 3 Hall, Section 21-15-19.

Columbia County Area

The Amerada Petroleum Corp. set 15½-inch casing at 50 feet in No. 1 Baker-Joiner, Section 2-18-22. The Atlantic Oil Producing Co. is down 1,630 feet in No. 1 Weaver, Section 36-15-20; has rig up for No. 2 Murphy and has set 8-inch casing at 2,010 feet in No. 3, Section 14-15-20.

Hosey-McDonald's Haynes well had derrick blown down and is now standing in an abandoned condition with no casing at the well at a depth of 2,155 feet, Section 30-19-18. The Magnolia Petroleum Co. has rig up for No. 6 Hammond, Section 25-15-20. Neibert and others set 10-inch casing at 60 feet in No. 1 Barge, Section 22-18-22.

The Transcontinental Oil Co. set 6-inch casing at 2,060 feet in No. 2 Hammond, Section 25-15-20.

Bellevue Field, Bossier Parish

The Gulf Refining Co. completed No. 12 Bliss & Weatherbee, Section 10-19-11, pumping 12 bbls. at 401 feet.

The Humble Oil & Refining Co. completed Bliss & Weatherbee A-12, Section 10-19-11, pumping 30 bbls. at 409 feet.

The Standard Oil Co. completed No. 7 fee, Section 11-19-11, pumping 2 bbls. at 585 feet.

Bliss and Weatherbee set 6-inch casing at 345 feet in No. B-8 Bliss & Weatherbee, Section 15-19-11. The Humble Oil & Refining Co. is drilling at 210 feet in No. A-13 Bliss & Weatherbee, Section 10-19-11. The Gulf Refining Co. is down 290 feet in No. 13 Bliss & Weatherbee, Section 10-19-11. The Standard Oil Co. set 10-inch casing at 450 feet in No. 1 McCloud, Section 13-19-11, and is down 130 feet in No. 12 Wyche, Section 14-19-11.

Caddo Parish

The Gulf Refining Co. completed No. 215 Ferry Lake, Section 15-20-16, flowing 3,000 bbls. at 2,286 feet.

The Arkansas Caddo Oil Co. is down 900 feet in No. 1 Nuckerson, Section 30-19-15. The Dixie Oil Co. has gone back into No. 43 Robertsshaw and set 6-inch casing at 2,668 feet. This well was completed at 1,710 feet, Section 13-21-15, Pine Island district.

The Gulf Refining Co. has made location for a deep test 1,615 feet west and 990 feet north of the southeast corner of Section 14-20-16 on the Ferry Lake lease. Rush and others set 6-inch casing at 1,845 feet in No. 1 Ruderdorf, Section 11-20-16 and the Simms Oil Co. is drilling gas rock at 1,055 feet in No. 3 Noel, Section 7-21-14.

Claiborne Parish

The Ohio Oil Co. completed No. 1 Whaley, Section 9-23-8, pumping 50 bbls. at 2,798 feet.

Arnett and associates have derrick pattern on location for a well on the Calhoun lease, Section 26-21-6. The El Dorado Chief Oil Co. is reaming in sandy shale at 2,160 feet in No. 1 Gandy, Section 36-22-7.

The Forrest Oil Co. has started drilling No. 1 Fields and is down 100 feet, Section 22-19-5. The Ohio Oil Co. set 6-inch casing at 2,735 feet in No. 11 Seegers, Section 19-23-8.

The Standard Oil Co. is drilling gumbo at 2,110 feet in No. 8 Guy Oakes, Section 29-21-7 and has rig up for No. 1 Loyd, Section 10-20-5. Woodley & Collins are moving in rig to drill No. 1 Reynolds, Section 30-21-4.

Red River Parish

The Fortuna Oil Co. has shut down No. 16 Armistead at 3,370 feet repairing boiler, Section 24-12-11.

Arkansas Wildcats

Cleveland County—Markle Syndicate is down 100 feet in No. 1 Plumer, Section 22-9-10.

Columbia County, Stephens Field: The Magnolia Petroleum Co. completed No. 5 Hamomnd, Section 25-15-20, pumping 40 bbls. at 2,110 feet.

Drew County: Rhodes and others abandoned their test on the Martin lease in Section 27-18-8, at 2,003 feet. Graves and others set 8-inch casing at 1,752 feet, corrected casing seat, and are drilling sandy shale at 1,760 feet, Section 10-13-8. King and Wilson shut down No. 1 Trotter at 150 feet repairing boiler, Section 12-13-6. Rhodes and others have derrick up for No. 1 Harris, Section 5-13-8.

Grant County—Hill and Arnold have derrick pattern on location for No. 1 Meek, Section 8-4-12.

Nevada County—Smitherman-McDonald are bailing 7 feet of sand at 1,200 feet in No. 3 Womack, Section 10-14-21.

Louisiana Wildcats

Bienville Parish: The Arkansas Fuel Oil Co. is drilling at 3,175 feet in its deep test on the Harrell lease in Section 6-18-5, 2 miles north of Arcadia.

Bossier Parish: Palmer & Davidson completed No. 1 Caplis, Section 12-16-12, making 2,500,000 feet of dry gas at 898 feet.

Skannel and others completed No. 1 McDade, Section 12-17-12, making 2,000,000 feet of dry gas at 2,473 feet.

Armistead, trustee, is drilling at 330 feet in No. 1 Bernstein, Section 11-20-13, 4 miles northeast of Benton.

In the north end of Bossier Parish, Estes and others are drilling at 1,010 feet in No. 1 Bodcau Lumber Co., Section 15-23-12.

In the Elm Grove district, Skannel and others are building derrick for No. 1 Smith in Section 24-17-12. The Standard Drilling Syndicate is drilling at 415 feet in No. 1 Johnson, Section 18-18-11, 10 miles east of Shreveport.

Caldwell Parish: Culver and others are drilling at 735 feet in No. 1 fee, Section 21-14-4, 4 miles north of Columbia.

La Salle Parish: The big gas well, drilled by Stovall and others on the Louisiana Central Lumber Co. lease in Section 27-10-2e, bridged over and has been abandoned at 1,445 feet.

Helm & Burch set 6-inch casing at 1,500 feet and are preparing to test 2 feet of sand in No. 1 Urania, Section 21-11-2e, 5 miles north of Urania.

Lincoln Parish: The Middle Fork Syndicate got salt water in No. 1 McKey, Section 9-20-3w, and the test has been abandoned at 2,625 feet.

Morehouse Parish: The Humphreys Carbon Co. abandoned No. 1 Spyker, Section 17-20-5, at 100 feet. The Transcontinental Oil Co. got salt water in No. 2 Chess Wymond, Section 1-18-5, and the test has been abandoned at 2,370 feet. The Carson Carbon Co. is drilling at 110 feet in No. 2 Erwin, Section 28-20-5e. The Humphreys Carbon Co. set 12½-inch casing at 195 feet in No. 1 Stephenson, Section 16-22-5e. Ladel and others set 6-inch casing at 2,252 feet in No. 19 fee, Section 32-20-5 and at 2,208 feet in No. 22 fee, Section 22-20-5. Morris, trustee, is bailing at 2,268 feet, arranging to test No. 2 Snyder, Section 32-20-5e. The Oil Field Exploration Co. set 6-inch casing at 2,193 feet in No. 1 Eldridge, Section 34-20-5e.

Ouachita Parish: J. M. Huber completed No. 2 Farmer, Section 4-18-5, making 9,000,000 feet of gas at 2,221 feet.

The Standard Carbon Co. completed

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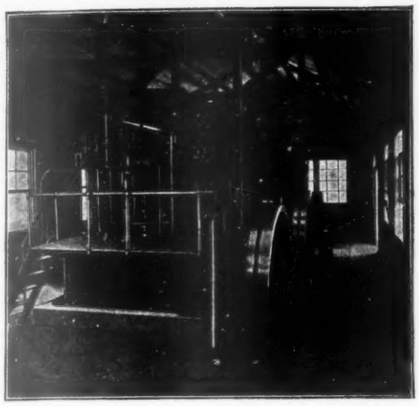

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No. 1 Spades, Section 33-19-5, making 3,500,000 feet of gas at 2,216 feet.

The Central Carbon Co. is drilling at 1,390 feet in No. 4 Flournoy, Section 22-19-5e. Haynes and others are drilling at 2,730 feet in No. 2 Dixie Lumber Co., Section 54-17-3e. J. M. Huber is rigging up to drill No. 24 fee, Section 6-19-5. The Palmer Corp. is drilling at 1,000 feet in No. 1 Hare, Section 28-19-5e, and set 6-inch casing at 2,150 feet in No. 2 Spades, Section 33-19-5. The Oil Fields Exploration Co. has derrick up No. 1 Collins, Section 18-19-5e.

The Southern Carbon Co. set 6-inch casing at 2,150 feet in No. 6 Fairbanks, Section 43-20-4e, and has derrick up for No. 30 and 31 fee, in Section 29-19-5e. The Union Gas Producing Co. is rigging up to drill No. 1 Tensas Delta, in Section 10-19-5e. The United Oil & Natural Gas Co. set 8-inch casing at 910 feet in No. 1 Cole, Section 36-20-4e. The United Oil & Gas Producing Co. is rigging up to drill No. 2 Kerr in Section 12-19-4e.

Union Parish

Allison and others are rigging up to drill No. 1 Heard, in Section 25-23-1w, 2 miles southwest of the Oakland well. Cargile and others' test on the Heard lease, in Section 25 21-1e, just west of Farmerville, is closed down to 1,450 feet on account of litigation.

The Gulf Refining Co. cemented 4½-inch casing to cut off the salt water at 2,430 feet in their test on the Security Trust lease in Section 23-23-1w, and are now drilling at 2,450 feet. No. 1 Green in Section 19-23-1e, drilled to 2,675 and is now standing waiting further development in this territory. Johnson and others struck a fresh water flow at 560 feet in No. 1 Pryor estate, Section 35-22-2w, lost the hole and moved over and are now drilling at 180 feet in the second hole.

Love and others are drilling at 2,200 feet in No. 1 Frost Johnson Lumber Co., Section 7-23-1e. The Neddo Petroleum Invincible Corp. lost the hole at 2,150 feet in No. 1 Smith, Section 2 23-3w, skidded over and are now drilling at 950 feet in the second hole.

James A. Noe and others are drilling at 2,570 feet in No. 1 Gulley, Section 36-21-1e, 6 miles east of Farmerville. The Union Power Co. set 10-inch casing at 950 feet in Union Saw Mill A-10. Section 5-20 3e, and in A-15, Section 2-20 3e.

Webster Parish: The Fortuna Oil Co. has abandoned its test on the Statton lease in Section 31-22-10, at 3,530 feet.

In the Cotton Valley district, the Fortuna Oil Co. is bailing salt water in the test on the Pruitt lease, in Section 17-21-9, 3 miles east of the discovery well. The Pruitt well is down 2,721 feet. Derrick is up for No. 1 Cox, in Section 23-21-10, 1½ miles south of the discovery well.

The Humble Oil & Refining Co. set 15½-inch casing at 200 feet in No. 1 Bodcau Lumber Co., Section 14-21-10, offsetting the discovery well. Derrick is up for No. 1 Hodges, in Section 12-21-10, 1 mile northeast of production. Olmstead and others have a fishing job at 380 feet in No. 1 Hudson, Section 17-19-10, 12 miles south of the Cotton Valley production.

The White Oil Corp. is running a core barrel in rock formation at 2,642 feet in No. 1 Gleason, Section 31-22-9, 3 miles northeast of production.

In the north end of Webster Parish, Smitherman & McDonald have cemented casing to cut off the salt water at 2,705 feet in No. 1 Baucher, Section 21-23-11, and are waiting orders.

West Carroll Parish: The Orion Oil Co. is drilling in shale at 1,800 feet in No. 1 Bain Wagon Co., Section 23-23-10.

JAPAN OPPOSES SINCLAIR GRANT

Japan is reported by the United Press offering to recognize the Russian Government and to evacuate Saghalin Island, but demands cancellation of the Sinclair oil concession to the northern part of Saghalin and cession to Japan of the Harbin-Changchun section to the Chinese Eastern Railroads.

MEXICAN FIELDS

(Continued from Page 40)

4-B), known locally as "Dad Smith's well," completed last August, and rated eventually over 20,000 bbls. actual production, was closed in entirely. There have been other good ones in this Lot 1 that have suffered the same fate, or been pinched, but this was the "big well" of this extensive eastern lot. Of course, some of the other big wells over in Lot 4, along the apex of the high structure, where La Corona Petroleum Co. and Transcontinental Petroleum Co. found some remarkable gushers at very shallow depths. Panuco as a whole considered have joined the departed ones but this was to be expected and discounted owing to the pull they were subjected to in their heyday. The Lot 1, however, to the east, regarded doubtfully for a long while, owing to initial failures, has been of late regarded as more and more of a mainstay; but here, too, despite new wells, salt water has been rearing its hydra head.

To come down to plain figures suffice it that at its peak some four months ago the Cacalilao sector was producing 8,000,000 bbls. a month. Now, despite an increase in drilling and consequently an increase in completions, good, indifferent and worthless, the production today, everything counted, is not more than 6,000,000 per month, a loss, owing to salt water invasions, of some 25 per cent in four or five months. That is the thing in a nutshell.

Fields in General

Drilling operations in the Cacalilao sector of the Panuco Field at this time are best recorded as follows: La Corona Petroleum Co.'s No. 37-A, Lot 4, is straightening a crooked hole at 560 feet; No. 66 same, drilling in the San Felipe at 1,375 feet; No. 74 and No. 75, same, have each cemented 8-inch at 1,230 feet, in the same formation. In Lot 1, its No. 61 is drilling in limestone at 1,905 feet; No. 62, cemented 8-inch at 1,200 feet in the San Felipe; No. 65 drilling in limestone at 1,945 feet; No. 67 cemented 10-inch at 1,900 feet in shale; No. 68 drilling in limestone at 1,925 feet; No. 69 has cemented 10-inch in shale at 1,075 feet; No. 70 is drilling in shale at 720 feet: No. 71 has been drilling in limestone at 1,825 feet; No. 72 is drilling in the same formation at 1,740 feet; No. 76 is drilling in shale at 325 feet. International Petroleum Co.'s No. 39, Lot 5, is drilling in gray lime at 2,170 feet; No. 70-A, Lot 4 cemented 8-inch in the San Felipe at 1,220 feet. Mexican Gulf Oil Co.'s operations in Lot 1, (4-C) follow: No. 13 is drilling in the San Felipe at 1,250 feet; No. 38 cemented 10-inch at 1,215 feet in the same formation; No. 48 drilling in gray lime at 1,590 feet; No. 61 (4-A), is drilling in hard shale at 850 feet. Mexican Sinclair Petroleum Corp.'s No. 51, Lot 2, cemented 10-inch at 1,214 feet in the San Felipe; its No. 10, Lot 1 (4-B), is drilling in limestone at 1,930 feet, with a showing of oil; No. 17 same, drilling at 1,945 feet in lime; No. 28 cemented 10-inch at 1,195 feet in the San Felipe; No. 29 drilling in lime at 1,870 feet: No. 30 drilling at 1,510 feet in the San Felipe; No. 2 is drilling at 1,170 feet in shale. Mexican Atlas Petroleum Corp.'s No. 3, Lot 1, cemented 8-inch at 1,103 feet, and No. 5 has done the same at 1,150 feet. Its No. 1, late in starting, is drilling in shale at 925 feet. Mexican Petroleum Co.'s No. 7, Lot 1, is drilling in lime at 1,460 feet. Mexican Eagle Oil Co.'s operations in fraction 4-B, of Lot 1, are as follows: No. 7, cemented 8-inch at 1,115 feet in the San Felipe; No. 9 shut down for orders at 1,900 feet; No. 12 cemented 8-inch at 1,106 feet in the San Felipe, and rigging standard to drill in; No. 13 cemented 8-inch at 1,120 feet in the same formation, as has No. 14 at 1,113 feet. Rich Mex Oil Co.'s extensive operations in fraction 4-B of Lot 1, after dismissing some nine derricks going up, rigging and ready to spud, are as follows: No. 41, is drilling in the San Felipe at 1,210 feet; No. 53, ce

ding; No. 45, drilling in shale at 1,055 feet; No. 50, cementing 8-inch in the San Felipe at 1,210 feet; No. 54, cemented 8-inch in the same formation at 1,153 feet; No. 64, cemented in the same formation at 1,160 feet; No. 79, cemented at 1,175 feet in the San Felipe, ready to drill plugs; No. 71, drilling in the San Felipe at 1,075 feet; No. 73, drilling in the same formation at 1,110 feet; No. 80, drilling at 1,625 feet in the same formation; No. 85, cemented 8-inch in the same at 1,120 feet; No. 87 is drilling at 525 feet in shale. Transcontinental Petroleum Co.'s No. 46, Lot 4, is drilling in the San Felipe at 1,510 feet; No. 49 same, drilling in shale at 610 feet; No. 73, Lot 1, drilling in the San Felipe at 1,655 feet; No. 77, same, drilling in lime at 1,800 feet; No. 78, same, drilling in the same formation at 1,925 feet; No. 79, same, drilling in the San Felipe at 1,305 feet; No. 84 and No. 85, both in Lot 1, are drilling at nominal depths in shale.

Old Sectors

In the older sectors of the Panuco Field, drilling operations are as follows: La Corona Petroleum Co.'s No. 85 San Manuel is drilling in shale at 1,010 feet; No. 84 Delicias, cemented 8-inch at 1,294 feet in lime; No. 80 Salvasuchi, drilling in shale and shell at 1,200 feet. English Oil Co.'s No. 3 Tampuche, cemented 8-inch at 1,535 feet in a limestone; Ita Mex Oil Co.'s No. 12, Lot 25 Tamiamolon, drilling in shale at 1,900 feet. International Petroleum Co.'s No. 1 Tanchicuin, drilling in gray limestone at 2,275 feet, and No. 21 there rigging. Mexican Atlas Oil Corp.'s No. 5 Juarez is drilling in lime at 1,565 feet. New England Fuel Oil Co.'s No. 14 Piazzi cemented 8-inch at 1,300 feet in limestone. Thomas and others', No. 19 Isleta Grande, drilling at 1,650 feet in limestone.

South Fields

In the South Fields, La Corona Petroleum Co., in its wildcat, No. 1, Lot 30 Comales, has a showing of a fairly light gravity oil in what is described as a sandy limestone at 4,900 feet. The hole will be bailed and the showing tested. This is perhaps the deepest showing of oil ever encountered in a hole in Mexico. In Cerro Azul, Huasteca Petroleum Co.'s (Mexican Petroleum), No. 33-A is drilling in a brown limestone at 1,752 feet; No. 39 drilling in basalt at 700 feet; No. 40 drilling in brown shale at 1,600 feet; No. 41, drilling in the same formation at 545 feet, and No. 42, spudded. In Tierra Blanca, No. 25 cemented 10-inch in brown shale at 1,725 feet, and No. 26 drilling in the same formation at 320 feet. Agwi Companies No. 2 Laguna de Tamiahua, is drilling in a hard sandy shale at 3,450 feet, a hopeless test. Cortez Oil Corp.'s No. 8-L Aguada, is drilling in shale at 2,100 feet. International Petroleum Co.'s No. 3 San Miguel is drilling in shales at 2,685 feet. Mexican Gulf Oil Co.'s No. 50 Toteco is drilling in brown lime at 1,825 feet, and No. 52 is rigging rotary. Mexican Eagle Oil Co.'s No. 24, Los Naranjos, Lot 132 Amatlan, is drilling in brown lime at 3,640 feet; No. 31, same, is drilling in lime with a showing of oil at 1,780 feet.

Topila and Miscellaneous

In the Topila district, Cortez Oil Corp.'s No. 6, Lot 58 Lagartero is drilling around 2,950 feet in the San Felipe. La Corona Petroleum Co.'s No. 1 Tobalo tested cemented 8-inch at 1,828 feet in limestone, and No. 2 Cues, well south of Topila proper, is drilling in shale at 450 feet. Ita Mex Oil Co., No. 1 Tobalo cemented 8-inch in a limestone at 1,750 feet. National Oil Co., No. 6, Lot 179 Quebrache is ready to spud. Mexican Oil Co. No. 1, Lot 19 Tamboyoche, is drilling in hard lime at 2,235 feet.

At Ebano, Mexican Petroleum Co.'s No. 23 Chijol is drilling in shale at 960 feet; its No. 32 La Dicha is drilling in lime at 2,023 feet; No. 34 same, shut down at 1,545 feet; No. 35, same, drilling in lime with a showing of oil at 1,685 feet; No. 5 La Culebra, north of the Tamesi River, is drilling in lime at 895 feet.

In Las Palmas, or El Barco, Kern Mex Oil Fields, No. 11, cemented 8-inch at 1,320 feet in shale. In El Barco, Mexican Gulf Oil Co.'s No. 12 is cementing 8-inch at 1,193 feet in a gray lime.

In Los Esteros, American International Fuel Co.'s No. 11 is drilling in gray lime at 3,074 feet, and No. 13 there is drilling at 1,698 feet in the same formation.

In Manuel, just north of Los Esteros, Mulcahey and others, are drilling in shale at 710 feet.

In Popote, near Linares, Agwi Companies, No. 21 is drilling with a diamond drill at 390 feet in sandy shale.

CALIFORNIA FIELDS

(Continued from Page 46)

ahead in a sandy shale at 3,945 feet and, since no showings of importance have been noted, it is beginning to look very discouraging.

Field Operations

Oil field operations reported to the State Oil and Gas Supervisor show 32 new wells started, compared with 28 during the previous week. Of the 32 new wells started, 7 were in the Torrance Field, 3 in the Long Beach Field, 3 in the Dominguez Field, 2 in Los Angeles County, 1 each in Huntington Beach, Santa Fe Springs, Coyote, Whittier, San Diego County, San Bernardino County and Ventura County and 10 in the fields of Kern County. Permits were issued for the following new wells:

Torrance

Location. Company. Well—
20-4-13 Anglo-American Oil Co. 1.
Associated Oil Co.—
8-4-14 Watson 4.
13-4-14 Bernard LeMohn 2.
23-4-14 International Drilling & Eng. Co. 4.
Sentinel Oil Co.—
24-4-14 Joughin 6
Standard Oil Co.—
22-4-14 Weston 1.

Long Beach

Federal Drilling Co.—
24-4-13 Leedom 1.
19-4-12 A. T. Jergins Trust 12.
San Martinez Oil Co.—
29-4-12 Booth Com. 4.

Huntington Beach

Standard Oil Co.—
4-6-11 Huntington Beach 25.

Santa Fe Springs

General Pet. Corp.—
5-3-11 Santa Fe 52-C.

Domingues

Shell Co.—
33-3-13 Reyes 5.
Union Oil Co.—
33-3-13 Hellman 4.
33-3-13 Callender 6.

Midway-Sunset-Elk Hills

31-32-24 Berry & Ewing 7
9-32-23 C. C. M. O. Co. 36.
4-32-24 Honolulu Cons. Oil Co. 34.
4-32-24 Honolulu Cons. Oil Co. 82.
18-11-23 Pliocene Oil Co. 1.
17-11-23 Western Minerals Co. 23.
35-30-24 Pacific Oil Co. 74.
35-30-24 Pacific Oil Co. 84.
13-30-21 Jewett Oil Co. 16.

CENTRAL WEST

(Continued from Page 50)

of Lawrence-Johnson failed to report one completion, while the South Weir Field of Johnson-Magoffin Counties reported six new wells in. R. G. Gillespie's No. 10 S. and J. Blanton is estimated at 5 bbls., while No. 16 on the Sam Blanton 125 acres is reported at 15 bbls Mid-South Oil Co.'s No. 4 Steve Howard farm, and No. 4, on the Sam Blanton farm, are reported at 5 bbls. each. Unknown parties drilled a well on the R. W. Wallin farm, reported around 10 bbls. and unknown parties drilled in a gas well on the J. D. Bond farm.

In Lee County, the Petroleum Exploration Co.'s No. 1 on the Treadway farm, in the Idamay district, is reported dry.

The runs of the Cumberland Pipe Line Co., through its gathering lines in the eastern Kentucky division for the week ending April 17, totaled 85,712.46 bbls. for a daily average of 14,118.75 bbls.

The Indian Refining Co.'s runs from the eastern Kentucky division during the month of March totaled 43,357.17 bbls., the oil being taken from Lee, Estill and Powell Counties.

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Oil Securities More Active But Irregular

Small Recoveries From Some New Lows. Brokers' Ignorance of Oil Matters Largely Responsible for Uncertainty in Market

By N. O. Fanning
Room 525 No. 30 Church St., New York

NEW YORK, April 21.—Oil securities were more active during the last week, and the trend was highly irregular. A concerted drive on certain issues resulted in new low prices being established for the year, and The Oil and Gas Journal's weekly average dropped to the year's low of 50.13, compared with a high, reached on February 5, of 57.46.

Stocks making new lows for the year are shown in the following table, which gives also the decline from the peak:

	New Lows	Year's Highs	Points Decline
Calif. Pet.	22½	29¼	6¾
Cosden & Co.	31⅞	40¼	8⅜
General Asphalt	33½	46⅝	13⅛
Houston Oil	64⅞	82½	17⅝
National Supply	62	72¼	10¼
Pacific Oil	47⅝	58¼	10⅝
Prod. & Ref.	26	43½	17½
Pure Oil	22	26⅝	4⅝
Stand. of Cal.	57⅞	68½	9⅝
Stand. of N. J.	36¼	42¼	6
The Texas Co.	40⅝	45⅜	4⅞
Transcontinental Oil	3⅜	6¼	2½
White Eagle Oil & Ref.	25	29⅝	4⅝
Buckeye Pipe Line	60	85½	25½
Imperial Oil, Ltd.	103½	119	15½
International Pet., Ltd.	18⅝	22¼	3⅝
New York Transit	75½	97	21½
Ohio Oil	62	79½	17½
South Penn Oil	131	176	45
Stand. Oil of Ind.	58	68⅝	10⅝
Stand. Oil of Ky.	104⅝	120	15¼
Stand. Oil of N. Y.	39½	48	8½
Stand. Oil of Ohio	301	336	35
Cities Service, Bkrs. ctf.	13⅝	16	2⅜

These low prices were established during the early part of the week, and small recoveries were registered later on. There was no indication, however, of nervousness on the part of those operating for the decline.

Street Ignorant on Oil

Brokers in the financial district seemed generally to be puzzled over the oil outlook. There have been many contradictory stories and predictions lately. J. S. Cosden, for example, expressed himself as optimistic on Monday, but it was on that day that the drive on oil stocks began. Other optimistic statements were issued by men equally well informed. The street, however, refused to pay much attention to the optimistic utterances and turned to the reports of crude oil production.

It is quite plain that Wall Street is generally ignorant on oil matters, and the fact that it has little to go by furthers the uncertainty and no doubt impels many to keep away from the oil stocks entirely.

An example of the uncertainty regarding oil is not only given in the discussion regarding production, but also regarding stocks of oil on hand. Some maintain that present stocks are highly excessive, others that with consumption of oil at the present rate, the present surplus is justified from the point of view of safety. No doubt there is too much of a tendency to judge present conditions by the past.

There is a disposition on the part of many to expect an overproduction of crude oil this year. Numerous persons point to other years where a shortage was expected, and a surplus was realized. This has induced a high degree of caution, which, no doubt, is a good thing.

Situation as to Oil Stocks

During the past six months, the trend of oil securities has, roughly, followed the course of crude oil production. The latter declined continuously from July, 1923, to January, 1924, and then reached a level at which it has clung very closely since. Oil stocks advanced while crude output declined, and then stood quite still as production reached a settled level.

No doubt those in close touch with the oil situation and stock market both are awaiting a definite trend one way or another, and until that trend can be judged, little can be expected in the securities markets. If consumption this spring advances beyond production, while production stands still, securities may go up; if production increases or keeps up with consumption throughout the summer, securities may remain at present levels, or even decline; if production declines and consumption increases, bringing about a heavy withdrawal from storage, securities should advance rather sharply, conditions in other industries being equal. Of course such calculations are upset by special circumstances affecting national or international affairs in a broad way.

The fact that oil securities are down considerably from the year's high prices means practically nothing as to the future. It cannot be said, however, that the oil securities are now particularly vulnerable to bear raids, in view of the rather extensive declines. Technically, the oils can be said to be in a sound condition.

Ohio Fuel Oil Co. for year ended December 31, 1923, shows net profit of $264,464 after expenses and depreciation, equivalent to 82 cents a share (par $1) earned on 320,000 shares of outstanding capital stock, as compared with $205,847, or 64 cents a share, in 1922.

Houston Oil Co.

Houston Oil Co. for quarter ended March 31, reports net income of $1,036,313, after depreciation, depletion, etc. and including $132,677 profit on sale of capital assets.

White Eagle Oil Co.

White Eagle Oil and Refining Co. reports net income before depreciation and depletion for first quarter of 1924 as $1,007,588.75, compared with $790,000.72 for the same period 1923.

Cities Service Co.

The report of Cities Service Co. for 1923 shows gross earnings were $16,002,562, compared with $14,658,971 in 1922, and net to stock was $13,468,760, compared with $11,847,119. This was the equivalent, after the deduction of preferred dividends, to $18.28 a share earned on the average amount of common stock outstanding during the year. In 1922, $14.88 was earned on the common stock then outstanding.

Standard of California

Standard Oil of California reports net profits of $24,443,000 in 1923, about $2,500,000 less than in 1922, and equal to 10½ per cent on capital stock, par value $25. Cash dividends were $18,000,000. Total surplus was $63,723,000. Total stocks of all products on December 31 were 48,039,497 bbls. The company's gross production of crude oil in Montana rose from 3,134 bbls. in 1922 to 57,697 bbls. in 1923. The company's holdings in that State were increased to 79,557 acres. The Texas holdings were 39,408 acres. Bad weather delayed development in the Cold Bay district of Alaska, but progress was being made with development plans in Argentina, Colombia, in Mexico, where the holdings were increased to 61,500 acres, all in the Tehuantepec section; Ecuador, and in the Philippine Islands. While no drilling has been undertaken by the company in Mexico, plans are under way for development in the southern part of that country. The company controls through lease and fee 226,223 acres within the United States and 465,000 acres in other countries.

NEW YORK STOCK EXCHANGE—LIST OF ACTIVE STOCKS

No.	Stocks—	Par	‡Dividend Rate	Closing Quotations Apr. 22	Apr. 15	Range High	Range Low	1924
1.	American Republics	..	..	*27	33	43	25	
2.	Associated Oil	25	6	28⅝	29⅝	34⅝	28¼	
3.	Atlantic Refining, common	100	4	107¾	*120	140⅝	104	
4.	Barnsdall "A"	25	..	14½	15	18⅞	14	
5.	Caddo Central Oil	..	..	*1½	1¾	4¼	1½	
6.	California Petroleum, common	25	7	22½	22⅝	29¼	22¼	
7.	Cosden & Co., common	..	..	20¼	33¼	40¼	29½	
8.	General American Tank	..	†2	38⅝	*41	46¼	38¼	
9.	General Asphalt	100	..	32	34½	49	31⅝	
10.	Houston Oil	100	..	62	66	82½	61⅝	
11.	Independent Oil & Gas	10	..	7⅛	7¼	9¼	6⅝	
12.	Indian Refining	10	..	*4	4	5⅜	3⅜	
13.	Invincible Oil	50	..	13½	14¼	15⅞	12⅜	
14.	Maracaibo	..	..	25½	27½	37½	25⅜	
15.	Mariand	..	..	33⅜	35⅝	42	33⅝	
16.	Mexican Seaboard	..	..	19⅝	17½	24½	14½	
17.	Middle States Oil	10	..	4	4⅛	6⅜	3⅜	
18.	National Supply	50	6	*61	62	72¼	60¼	
19.	Pacific Oil	..	†2	45⅝	48⅞	58¼	45¼	
20.	Pan-American, common	50	16	45	46¼	61¼	44¼	
21.	Panhandle Prod. & Ref.	..	..	3	3	4⅛	2¼	
22.	Phillips Petroleum	..	†2	36⅞	38½	42¼	33⅝	
23.	Pierce Oil, common	25	..	1½	1½	4½	1¼	
24.	Producers & Refiners	50	..	23	26⅛	43½	23	
25.	Pure Oil Co., common	25	6	21⅛	22½	26⅞	21¼	
26.	Royal Dutch, N. Y., sh.	13.40	2.62	54¼	54½	59⅛	48	
27.	Shell Transport	10	x92½	39⅝	39	41½	33	
28.	Shell Union, common	..	†1	16¼	17	20⅛	16¼	
29.	Simms Petroleum	10	..	12⅝	12⅞	14⅞	10⅝	
30.	Sinclair Consolidated, common	..	†2	20⅛	20¼	27½	19⅝	
31.	Skelly Oil	25	..	24	23⅝	29	22⅝	
32.	Standard of California	25	8	56½	59	68⅛	55½	
33.	Standard Oil of N. J.	25	4	35	36⅝	42¼	34⅝	
34.	Standard of New Jersey, pfd.	100	7	*117⅝	117⅝	118⅝	115⅝	
35.	Superior Oil	..	..	4⅛	5	5⅝	2⅝	
36.	The Texas Co.	25	12	40¼	40⅝	45⅝	40⅝	
37.	Texas & Pacific Coal & Oil	10	..	9	9½	15¼	9	
38.	Tide Water Oil	100	4	120⅛	123	151	120	
39.	Transcontinental	..	..	4	3⅜	6¼	3⅜	
40.	Union Tank, common	100	5	*98⅝	100	103	94	
41.	White Eagle Oil & Ref.	..	2¼	24⅞	25	29⅝	24⅞	
	Standard Oil Stocks							
42.	Anglo-American Oil	£1	20	15⅞	15⅞	18	15⅝	
43.	Borne Scrymser	100	12	220	225	264	150	
44.	Buckeye Pipe Line	50	14	*63	60	85½	60	
45.	Chesebrough Mfg., com.	25	14	52	52	53⅝	29¼	
46.	Continental Oil	25	5	*41	*43	54⅞	42½	
47.	Crescent Pipe Line	25	..	*13	*13½	20	16	
48.	Cumberland Pipe Line	100	10	*127	*128	144	109	
49.	Eureka Pipe Line	100	8	95½	95½	105	95	
50.	Galena-Signal, common	100	4	57	*57	69⅝	57	
51.	Humble Oil & Ref.	25	4.8	37½	39⅜	43⅝	36⅛	
52.	Illinois Pipe Line	100	16	131	130	161	136	
53.	Imperial Oil, Ltd.	25	16	99	103⅛	119	99	
54.	Indiana Pipe Line	50	16	89	*94	100	85	
55.	International Pet. Co.	..	x50	18	18⅝	22¼	17⅞	
56.	Magnolia Petroleum	100	4.6	136	137	160	135	
57.	National Transit	12.50	16	*21	*21¼	25⅞	21¼	
58.	New York Transit	100	10	*74	74	97	75	
59.	Northern Pipe Line	100	25	96	*95½	107½	93½	
60.	Ohio Oil Co.	25	4	61½	63¾	79½	60½	
61.	Penn-Mex Fuel	25	..	*32	35	45⅝	34	
62.	Prairie Oil & Gas	100	8	216½	227½	269	215	
63.	Prairie Pipe Line	100	8	102	102½	111	100	
64.	Solar Refining Co.	100	15	192	198	225	170	
65.	Southern Pipe Line	100	16	94	94½	100	89½	
66.	South Penn Oil	100	..	130¼	133	176	130	
67.	South West Pa. Line	100	8	*83	*84½	89	80	
68.	Standard of Indiana	25	10	56	58¼	68⅝	56⅜	
69.	Standard of Kansas	25	8	40	41½	50½	40⅝	
70.	Standard of Kentucky	25	16	103	105¾	120	102½	
71.	Standard of Nebraska	100	20	228	237	256½	198	
72.	Standard Oil of N. Y.	25	5.6	39	40	48	38¼	
73.	Standard of Ohio, common	100	10	286	305	336	280½	
74.	Swan & Finch	100	..	48½	53	81	34	
75.	Vacuum Oil	25	10	58⅛	61¼	69¼	56½	
76.	Washington Oil	10	..	*27	*28	29	25	
	Miscellaneous Stocks							
77.	Cities Service, banker's shares	..	†21	14	14	16	13⅜	
78.	Gulf Oil Corp. of Pa.	25	6	57⅝	58½	65	57⅝	

*Bid, no sales. †In dollars. ‡6 per cent in cash and 15 per cent stock dividend declared; now being paid in scrip. §The figures carried in this column are kept up-to-date as far as possible but are not guaranteed. xCents per share.

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange weekly was as follows.

Apr. 22	46.77	Mar. 18	51.53	Feb. 11	55.67
Apr. 15	50.13	Mar. 11	53.38	Feb. 5	57.46
Apr. 8	52.66	Mar. 4	52.38	Jan. 29	55.40
Apr. 1	51.74	Feb. 25	53.12	Jan. 22	53.90
Mar. 25	51.83	Feb. 18	52.24	Jan. 15	53.70

Official Report On Present Conditions In Mexican Fields

By Charles E. Kern

WASHINGTON, D. C., April 28.—Sub-Secretary Jose Vasquez Schiaffino of the Department of Industry, Commerce and Labor, has just issued an official interview of length regarding the status of the petroleum industry in Mexico. He declares the reason for the diminution of the production and exportation of oil and its derivates during the last months of 1923 and the first part of 1924 was of a purely political nature. In the important Tuxpam and Minititlan regions the presence of rebel forces had an unfavorable effect upon the operations of the petroleum companies, with a corresponding decrease in exportations. In the Tehuantepec region exports had been entirely suspended. As to the remainder of the territory under development, there had been no cessation either in production or exportation.

The work of drilling wells showed an augmentation during February and March of this year of more than 100 per cent over the last three months of 1923. The number of permissions for drilling wells in the Panuco district for the past six months was as follows: 1923, October 77.

ATTORNEYS GENERAL ARE INVITED TO VISIT MID-CONTINENT FIELD

(From the Bulletin of the Mid-Continent Oil & Gas Association)

The Association of Attorneys General of the various States has met from time to time during the past six months and passed resolutions suggesting lines of inquiry into the oil business and urging the Federal Trade Commission to make the investigation to ascertain causes of fluctuation of prices and as to whether or not there is any violation of anti-trust laws or any illegal trade practices within the industry.

In a letter to The Oil and Gas Journal, March 29, George M. Napier, Attorney General of the State of Georgia, and secretary of the Attorneys General Association, made the following observation:

"It would be a very fine thing if the attorneys general could come into your State and make a personal inspection of the methods of extracting petroleum from the earth and the method of refining, etc."

Thereupon the following letter by the secretaries of the Western Petroleum Refiners' Association, the Association of Natural Gasoline Manufacturers, and the Mid-Continent Oil & Gas Association was dispatched to Mr. Napier inviting him to inspect the oil industry and its operations in the Mid-Continent Field:

"Noting your letter to The Oil and Gas Journal relative to a visit to the oil fields in connection with the investigation by the attorneys general of the oil industry, we take this occasion to extend to yourself and the Asso ciation of Attorneys General an invitation to visit the Mid-Continent Field. This invitation is a joint one extended by the Western Petroleum Refiners' Association, of which Mr. Howard Bennette is the Managing Director, the Association of Natural Gasoline Manufacturers, of which Mr. A. V. Bourque is secretary, and the Mid-Continent Oil & Gas Association, of which the writer is secretary.

"These three associations have their headquarters at 504 and 505 Cosden Building, Tulsa, Okla., which is located in the heart of the greatest oil producing region in the world. Every phase of the industry is to be seen here in operation. To one who is not familiar with the various branches of the petroleum business, a visit to Tulsa and environs should constitute a liberal education on the subject. It is, therefore, with great hope that your organization will see fit to make the inspection that we extend you this hearty invitation and proffer our assistance and cooperation in making your visit a pleasant and instructive one."

The following reply has been received from Mr. Napier:

"Permit me to express my appreciation of yours of the 7th instant, just received, and beg to assure you that I appreciate the joint invitation extended by the Western Petroleum Refiners' Association, through Mr. Howard Bennette, the managing director, and the Association of Natural Gasoline Manufacturers, through Mr. A. V. Bourque, its secretary, and through yourself as secretary of the Mid-Continent Oil & Gas Association—the invitation being to the Association of Attorneys General.

On their behalf, I assure you of our appreciation of your courtesy in extending this invitation, and I will make it known to them that the same has been received by me.

The visit would be of intense interest to me, both as a citizen and as an official, and should a meeting be had in your State, it will be a great deprivation if I am unable to attend personally.

"Again thanking you for your courtesy in communicating this invitation to me, I am."

November 45, December 54; 1924, January 98, February 164, March 150.

The activity in sinking new wells has been stimulated by the invasion of salt water in certain of the oldest and largest producing wells.

Since the first of the present year and down to April 1 there have been 65 new wells brought in, with a production of 198,000 bbls. daily. It is expected the industry will show a complete recuperation from the temporary depression of 1923.

Active exploration for oil is being extended in the States of Puebla, Tamaulipas, Nuevo Leon, Vera Cruz, and in Lower California. Promising indications have been found in Chiapas, Tabasco, Jalisco, Nayarit, Chihauhua, Sonora, and in fact all down the West Coast to the extremity of the Republic on the south.

It is estimated the production of all the wells in operation during March was 13,500,000 bbls. The actual present daily production is 451,000 bbls., an average per well of 1,000 bbls., the production varying according to the needs of the operating companies and being regulated thereby. There are now 450 producing wells in operation, belong to 82 companies, all foreign, the Mexican interest being practically nil.

It is estimated that oil deposits are to be found throughout 148,300,000 acres of the public domain. Actual production is confined to some 15,000 acres.

The nationality of the various oil companies in their order of importance is as follows: American, English, Dutch, French, Spanish, Italian, Norwegian, Cuban, Mexican.

The total amount of capital invested is estimated at $360,000,000 (gold) of which 60 per cent is American, 30 per cent British and the remainder distributed as noted. The lands upon which the various companies are operating are estimated to have a value of $170,000,000 (gold).

GOOD WEATHER—PROSPERITY

The nation-wide enjoyment of good weather is increasing the demand for petroleum and its refined byproducts.

Months of great activity are very near. To take care of this speeding up of the entire industry it will require men, equipment, machinery, and supplies of all kinds.

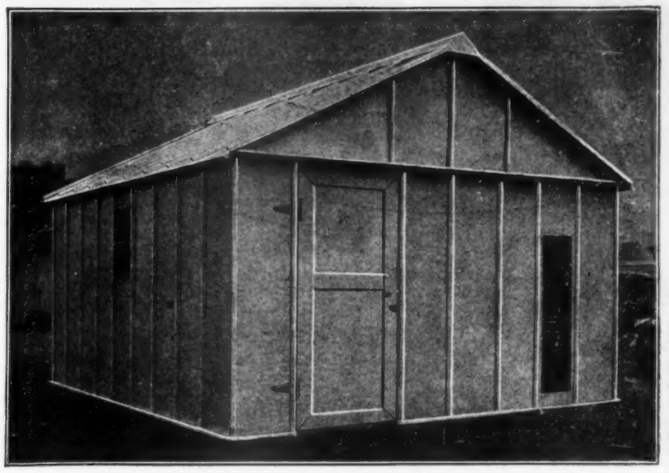
As the nature of the industry necessitates quick buying, the real men of the business read the Classified Wants Section every week so that they may keep in close touch with equipment, material, and supplies that are ready for delivery.

This gives you a good opportunity to get a large volume of paying business at a small cost.

Your wants will be satisfied only to the extent of the number of people who know about them. List your wants in the Classified Section where 25,000 real oil men will see them. It will help you.

PIPE LINE FOR PERSIAN OIL?

A report from Baku states that a general topic of conservation there is a scheme, alleged to have emanated from the Barnsdall Oil Corp. to lay another pipe line from Baku to Batoum. As the existing pipe line is ample for the conveyance of the oil dispatched from the Baku fields, it is thought that the corporation has established itself in Baku mainly with a view to providing for itself in Baku a point d'appui for the transport of North Persian oil later on, as the latter could only be forwarded via Baku.



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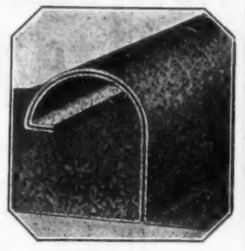

A Few Oil Industry Uses

Producing

Engine Houses
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Compression Plants
Refrigeration Plants
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A Swartwout Metal Building, whether erected in the oil fields of Northern Montana or in Mexico, fulfills satisfactorily the particular need for which it was purchased. Quickly erected, permanent, yet easily moved if occasion arises. Weatherproof, rust-resisting and fire-resisting, Swartwout Metal Buildings are particularly desirable for oil country service.

The patented Swartwout Interlocking Joint, illustrated opposite, is the "backbone" of the Swartwout Metal Building. It is light, yet has I-Beam strength.

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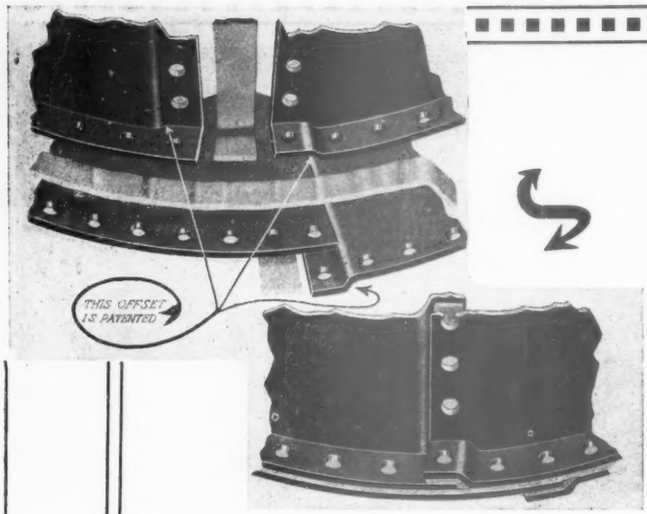

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MALONEY

EFFECTS OF SINCLAIR LINE FROM WYOMING

(Continued from Page 20)

clair Oil Purchasing Co. can buy through the operations of the Sinclair interests in Wyoming plus the oil already in storage.

The present runs of the big transcontinental line are made up of 20,000 bbls. daily of royalty oil, about 4,000 bbls. of Teapot Dome oil and 4,000 bbls. of Salt Creek oil from the Midwest Oil Co. The royalty oil is from the Salt Creek Field, being the Government's proportion of the production, purchased under contract by the Mammoth Oil Co.

Shipping Royalty Oil

It is understood that all current royalty oil as well as the Teapot Dome production will continue to be shipped east through the Sinclair line. Previously this oil has been run into tankage of the Sinclair Crude Oil Purchasing Co. at Clayton, Wyo. There are now between 10,000,000 and 11,000,000 bbls. in storage, the total capacity of the tank farm, which is made up of 150 tanks of 80,000 bbls. each, being 12,000,000 bbls.

The Sinclair Wyoming Oil Co. has a production of about 1,000 bbls. a day. This is being run into storage. While it would be possible for the Sinclair Pipe Line Co. to increase its runs east to the capacity of the line by drawing on storage, it is not planned to do this for the present.

The big pipe line starts at the Salt Creek Field in Wyoming and ends at Freeman, Mo., south of Kansas City, a distance of 717 miles. The laying of the first pipe began on March 20, 1923, and the line was completed three months ahead of schedule. It cost between $18,000,000 and $19,000,000.

It is comprised of 10-inch and 12-inch line and has 17 pump stations. The first section of the line from the field to the tank farm has been in operation for several months. Running of oil east from the tank farm began on March 1 at the rate of 35,000 bbls. daily to fill the line. The flow was carefully regulated so as not to put too much of a strain on the pipe at first and the first oil arrived at Freeman on the night of April 12. There were no breaks in the pipe and no mishaps of any character.

The line holds 500,000 bbls. of oil, and in this connection it is interesting to note that the operation of the line removes that quantity of oil from the market. To keep the oil moving 500,000 bbls. will have to continue in pipe line storage which is not available oil storage. Incidentally, at $1.60 a barrel for Salt Creek crude this adds something like $800,000 to the investment involved in the pipe line.

The Sinclair line runs southeast through Wyoming following the Platte River to Kearney, Neb., and continues southeast through Nebraska and Kansas to Freeman, Mo., 40 miles south of Kansas City. The fall of the line from Wyoming to its terminus in Missouri is an even mile.

At Freeman it connects with the Sinclair Pipe Line Co.'s system running north out of the Mid-Continent to Chicago. It crosses near Freeman the Prairie Pipe Line Co.'s system running north out of the Mid-Continent to Chicago and Wood River.

It is possible by connecting up with the Prairie system for Rocky Mountain oil to proceed by pipe line to refineries at New York, Philadelphia and Baltimore.

Common Carrier Line

The Sinclair line is a common carrier line. Should the Prairie Oil & Gas Co. develop a large production in the Rocky Mountain territory it is conceivable that it would ship through the Sinclair line, and the same applies for the Ohio Oil Co. The present indications, however, do not point to any taxing of the capacity of the Sinclair line, but rather to runs below the capacity of the line. This is based on the declining production in the Salt Creek Field and the uncertainty regarding operation and production of the Teapot Dome Field.

The big wildcat play in Colorado, Nebraska and western Kansas has some possibility of developing production which eventually might find an outlet to the market through the Sinclair Pipe Line Co.'s Rocky Mountain line. A 125-mile line could be run from the Union Oil Co. of California's development at Fort Collins, Colo., on the Wellington Dome structure, to connection with the present Sinclair line at Mitchell, Neb. The Texas Co.'s development at Moffat in Colorado could be connected with a similar line running to Mitchell, Neb., a distance of 250 miles. This, however, would involve crossing the Continental Divide and it would probably be more practical, should a sufficient production be developed to justify a large outlay in pipe lines, to run the line north to Glendo, Wyo. The distance would be about the same.

A connection of the production in Russell County, western Kansas, with the Sinclair trunk line system from the Rocky Mountain district would involve the building of a line about 125 miles long connecting probably at Washington, Kans.

Including gathering and trunk lines, the Sinclair Pipe Line Co., which is owned equally by the Sinclair Consolidate Oil Corp. and the Standard Oil Co. of Indiana, has a transportation system of 5,630 miles, operating in eight States.

MAMMOTH CO. DENIES TEAPOT ALLEGATIONS

CASPER, Wyo., April 19.—The Mammoth Oil Co., in its answer in the Teapot Dome case, denied allegations of fraud and asserted the validity of its lease, bringing the suit squarely to issue at a date to be set by Judge T. Blake Kennedy. The Mammoth's answer requests that the Government's bill in equity be dismissed. It denies that Teapot Dome lease was executed by Albert B. Fall, then secretary of the Interior, without legal authority, or that there was any illegal collusion between Fall and Harry F. Sinclair, concerning the lease. Should the Government's bill be granted and the lease annulled, the corporation claims it should be reimbursed for the $5,000,000 spent in development of the lease and for all obligations assumed.

Date for hearing of the case will be set after the Government's special counsel have had opportunity to study the Mammoth Co.'s answer.

The Sinclair Pipe Line Co. and the Sinclair Crude Oil Purchasing agency, which filed answers last week will, it is believed, be able to show they were in no way connected with the leasing contract of the Government with the Mammoth Oil Co. and are therefore not liable as parties to the suit. This is further borne out by the action of the receivers in discharging from the receivers' care all property of the two companies and retaining only such equipment and holdings as were designated Mammoth Oil Co.'s property.

FRIO RIVER BED SUITS

OKLAHOMA CITY, Okla., April 21.—A controversy over the ownership of beds of rivers and the rights of riparian land owners is developing in Texas as it did once in Oklahoma with relation to the Arkansas, Cimarron, Grand and Red Rivers, according to officials of the Coyle-Concord Oil Co., which is contending for rights in the Frio River in the Callihan district of southern Texas.

The company has won two suits. A third was filed recently by A. W. Lark, of McMullen County, who claims his title extends to the middle of the stream by virtue of a Spanish grant made in 1835, validated by the first Congress of the Republic of Texas. The Coyle-Concord Co., backed principally by New England interests headed by Capt. A. G. Coyle, has drilled a well in the river bed to 632 feet. It has been gassing heavily and making some oil but has been shut in pending the suits.

CALIFORNIA OIL FIELD OPERATIONS FOR MARCH

According to figures collected by the American Petroleum Institute, Pacific Coast office, the total production of crude oil in California for March amounted to 19,913,262 barrels, an average of 642,363 barrels per day. This is a decrease of 24,576 barrels per day, as compared to February production.

Stocks increased during the month 1,206,214 barrels. The total stocks at the end of the month were 96,666,719 barrels. The total stock increase for 1924, up to March 31, was 4,741,566 barrels. Indicated consumption for March was 18,707,048 barrels, an average of 603,453 barrels per day. This is a decrease of 21,911 barrels per day under February consumption.

One hundred and thirty-one wells were completed during the month with an initial daily production of 62,771 barrels, compared with 102 wells completed during February with an initial production of 44,471 barrels.

PRODUCTION

(Figures for production and stocks are in barrels of 42 Gallons)

District—	Barrels Per Mo.	Daily Average Mar., 1924	Feb., '24	Mar. '23
Kern River	571,429	18,433	19,045	20,305
McKittrick	179,156	5,779	5,851	6,115
Midway-Sunset	3,016,701	97,313	95,179	77,139
Elk Hills	1,189,088	38,358	36,942	22,461
Lost Hills-Belridge	109,216	3,523	3,502	6,651
Coalinga	950,464	30,660	21,748	12,660
Wheeler Ridge	28,734	927	894	251
Watsonville	1,782	57	57	58
Santa Maria	244,924	7,901	7,963	8,424
Summerland	4,508	145	146	146
Ventura-Newhall	306,323	9,881	9,798	10,097
Los Angeles-Salt Lake	80,297	2,590	2,913	3,327
Whittier	62,266	2,009	2,019	1,763
Fullerton	323,285	10,429	10,860	10,572
Coyote	127,635	3,795	4,065	16,872
Santa Fe Springs	2,632,741	86,540	105,742	152,241
Montebello	522,312	16,849	18,542	11,862
Richfield	397,265	12,815	13,786	18,581
Huntington Beach	1,733,090	55,906	59,835	110,122
Long Beach	6,104,570	196,922	219,013	138,778
Torrance	1,168,181	37,683	27,597	3,099
Domingues	119,286	3,848	1,443	.....
Total	19,913,262	642,363	666,939	632,523
February	19,341,226	666,939		
Decrease	*572,036	24,576		

*Increase.

FIELD, REFINERY, PIPE LINE AND TANK FARM STOCKS OF CRUDE, RESIDUUM AND TOPS

	Mar. 31, 1924	Feb. 28, 1924	Mar. Stock Increases	Mar. 31, 1923
Heavy crude, heavier than 20° A. P. I. including residuum	46,020,888	45,325,081	695,807	41,223,832
Refinable crude, 20° A.P.I., and lighter	36,615,464	36,385,110	230,354	21,772,017
Tops	14,030,367	13,750,314	280,053	4,282,303
Total	96,666,719	95,460,505	1,206,214	67,278,152

	Mar. 31, '24	Feb. 28, '24	Mar. 31, '23
Total quantity of above products held in fields, pipe lines and tank farms	64,986,281	63,151,029	53,036,002
Total quantity of above products held at refineries	31,680,438	32,309,476	14,242,150
Total stocks, as above	96,666,719	95,460,505	67,278,152

DEVELOPMENT

District—	New Rigs Up	Active Drg.	Comp.	Daily Init. Output	Active Prod.	Abd.
Kern River	4	4	1	5	2,141	...
McKittrick	2	8	...	.....	286	3
Midway-Sunset	30	65	11	1,928	2,720	...
Elk Hills	5	17	2	745	208	...
Lost Hills-Belridge	..	6	...	.....	242	...
Coalinga	..	11	...	.....	1,153	5
Wheeler Ridge	2	5	2	300	10	...
Watsonville	..	...	...	.....	6	...
Santa Maria	..	7	...	.....	312	...
Summerland	..	...	...	.....	135	...
Ventura-Newhall	..	30	1	1,212	562	6
Los Angeles-Salt Lake	..	...	...	.....	631	69
Whittier	..	...	...	.....	178	...
Fullerton	..	1	1	39	386	1
Coyote	..	4	...	.....	107	...
Santa Fe Springs	4	24	11	2,612	333	6
Montebello	..	6	1	72	152	3
Richfield	..	8	...	.....	180	1
Huntington Beach	4	33	2	1,198	271	3
Long Beach	11	101	21	11,510	400	3
Torrance	66	153	75	39,605	229	1
Domingues	7	19	3	3,545	6	...
Miscellaneous drilling	2	57	...	.....	....	5
Total March	137	553	131	62,771	10,549	105
Total February	81	593	102	44,471	10,283	57
Increase	56	40*	29	18,300	266	48
Average for year 1923	111	759	82	114,690	8,928	24
Average for year 1922	115	605	67	43,700	9,410	17
Average for year 1921	90	536	57	15,631	9,425	14
Average for year 1920	77	403	49	14,125	9,299	13
Average for year 1919	58	340	47	9,572	8,774	18

*Decrease.

OIL GONE IN MADAGASCAR

Exports appear to consider that the vast bituminous beds in Madagascar are the residues of former petroleum fields, and the extensive Triasic sands containing the oils have been so long exposed that most of the light essences have evaporated. Although the failure up to the present to find the free petroleum has been marked only by certain "indications," it is hardly probable that petroleum will be found in such quantities or at such depths as would render the getting of it commercially profitable. They also consider that extended efforts ought to be made, first, by borings in recognized localities on the west side of the islands as comprised in the Triasic zone, up to the west coast.

MID-WEST GAS ASSOCIATION

The Mid-Continent gas producers of Kansas and Oklahoma, at a meeting at the Booth Hotel, Independence, Kans., formed a permanent organization to be known as the "Mid-West Natural Gas Association," and selected the following officers: President, C. E. Stewart, Independence; secretary-treasurer, G. S. Baker, Independence; and vice president, A. L. Hall, of Bartlesville. The there officers and D. P. Fleeger, of Wichita, and Andrew Benson of Independence will form the executive committee.

PETROLEUM IN PORTUGAL

Petroleum products now come first among Portuguese imports in value, exceeding coal, which until recently was the largest single item under this head. The demand is considerable for bunkering, for industrial and domestic purposes, and for motor cars. The amount of petroleum imported in 1923 (including re-exports of benzine and kerosene to Spain) was as follows: Fuel oil, 63,665 tons; benzine, 28,920 tons; kerosene, 26,400 tons; mineral oil, 7,720 tons; paraffin, 1,595 tons.

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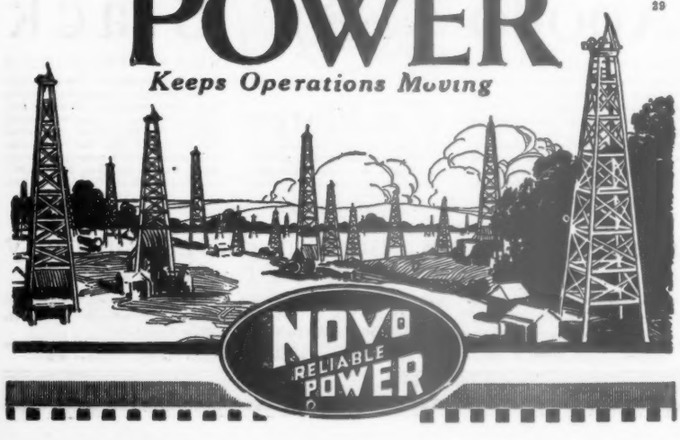

REFINERY CREDIT MANAGERS HOLD THREE-DAY MEET AT KANSAS CITY

By C. O. Willson

(Picture on Page 90)

KANSAS CITY, Mo., April 18.—Credit men representing Mid-Continent refinery organizations, with a few in attendance from other parts of the country, this afternoon closed a successful three days meeting. The attendance was much larger than any previous meeting of the credit men and it was generally conceded that the several business sessions which were held during the three days had accomplished many of the aims of those who last year were responsible for bringing about a general meeting of credit men connected with the refining industry.

The next meeting will be held in St. Louis in October, the exact date to be determined later. H. M. Edinger, treasurer of the Barnsdall Refining Co., Tulsa, was elected to serve as chairman at the St. Louis meeting.

Business sessions were held daily in the morning and afternoon and at the Wednesday night banquet and Thursday luncheon there were addresses concerned with the problems of the men directly responsible for the handling of credit in the manufacturing end of the oil industry. All the prepared addresses were followed by general discussions in which all took part, indicating the general interest taken in the subjects under discussion. The earlier sessions were reported in last week's Oil and Gas Journal.

All phases of credit were discussed in open meetings. If any general deduction was to be made from the prepared addresses and the discussions it would be that "too much credit" was being given in the sale of refined products by refiners. As expressed by one speaker there is a marked tendency on the part of the refiners "to sell credit rather than their products" and this situation was said to be responsible in a very direct way for many of the difficulties of the average refiner.

Mr. Pielsticker's Address

The meeting was favored by several addresses by men not directly connected with refinery credit work. At the banquet Wednesday night, at which H. M. Edinger, of the Barnsdall Refining Co., acted as toastmaster, F. A. Pielsticker, vice president of the Skelly Oil Co., and president of the Western Petroleum Refiners' Association, spoke on the subject, "Cooperation Between the Sales and Credit Departments." He stressed, as did several other speakers during the meeting, the absolute necessity of credit and sales departments of refinery organizations working harmoniously together with the view of giving their company maximum efficiency in the two departments.

In detailing ways and means to bring about this efficiency he said each department should furnish the other with all available information which will enable both to arrive at a speedy decision in any matter which comes to their attention. He said the credit department should know the salesmen and seek special cooperation from the traveling salesmen who have the personal contact with the customer and for that reason are often able to give valuable data regarding the credit standing of the buyer. He emphasized the value of speed, advance information, courteous treatment of customers and the constant study of business conditions in the credit department.

Too Much Cooperation

L. V. Nicholas, president of the National Petroleum Marketers' Association, said there was what he termed "too much cooperation between the credit and sales departments of refinery organizations." Pointing to the market conditions which prevailed last year, he said that in their anxiety to sell gasoline in a flooded market refiners had been too liberal with their extension of credit to jobbers, especially to those new in the business who, he said, in many cases were induced to enter due to the attractive credit arrangements offered by the sellers. He pointed out that this additional competition did not add to the gasoline consumption but did bring about a competitive situation which necessitated the continual expansion of credit business. He said the credit men should keep in touch with market conditions and when a particular area already had more wholesale and retail facilities than necessary, they should not look with favor to credit sales to new customers which would simply aggravate the situation and in the end result in serious harm to the manufacturers. He cited instances of evils arising from "too much credit" from the refiner.

C. H. Woodworth, manager of the adjustment bureau of the National Association of Credit Men, New York, was the third speaker at the banquet. He spoke on "The Credit Manager's Problem," and discussed in a general way credit problems as they apply to all industries.

The matter of joining the National Association of Credit Men was discussed during the meeting and on Thursday a resolution was adopted recommending that individual concerns join the petroleum group.

Thursday Luncheon

J. M. Judson, credit manager of the Sinclair Refining Co., Chicago, presided at the luncheon Thursday. James T. Bradley, vice president of the Commerce Trust Co., Kansas City, was optimistic in his discussion of "General Business Conditions." The speaker declared the situation in regard to supply and demand in practically all industries indicated a period of increasing prosperity for the remainder of the year. F. C. Freedly, assistant cashier of the Exchange National Bank of Tulsa, spoke on "The Bank as a Source of Credit Information." He stressed the need of cooperation on the part of credit managers with the bankers if they were to receive the maximum benefit from their banking connections.

Business Sessions

F. L. Bunn, of the Tidal Oil Co., presided at the morning and afternoon business sessions. The general discussions of the subjects touched upon usually consumed more time than the prepared papers which were read at the opening of the sessions. It is not possible to give in detail these papers or the discussions which followed. Following, however, are brief reviews of the several discussions.

"Credit granting in the past on tank car sales did not require the attention it now does," G. E. Craig, secretary of Miller Petroleum Co., Kansas City, said in discussing "Credit Granting on Tank Car Sales." In the olden days very few marketers resorted to the sharp practices of today. We, as credit men, are guilty of allowing the present laxness in credits to exist and we cannot say we have been on our toes, working for the best interests of the industry as a whole when we turn back and make a comparison of the past with the present."

"More consideration should be given terms. When you buy crude oil, it is cash, no discount. When you pay freight it is cash, no discount. When you pay your labor bills, it is cash, no discount. In fact 90 per cent of oyur crude purchases and manufacturing expenses are cash, no discount. Then why should we be granting a cash discount for our customers to pay within 10 days?

"Whenever you have a customer who sends you his checks several days to a week or so after discount date has elapsed, with advice that the car has just arrived and he is taking his discount, as he discounts all bills upon arrival of goods, and this check is accepted

by you in full payment of the account, you are not treating your customers alike as you are allowing this particular customer to receive a discount to which he is not entitled, while your company is paying interest on borrowed money to enable you to help a customer not entitled to the consideration. You, of course, cannot correct such practices at once, but you can write your customer and, in the first case, call his attention to the delay, asking that subsequent remittance be made far enough in advance to offset the delay. If you have a recurrence, then ask him to pay in full, refusing to O. K. any further shipments until the account is paid.

"We now have in use the Sight Draft, Arrival Draft, and Ten (10) Day Draft, all of which can be drawn for the gross amount of the invoice or subject to 1 per cent discount. I believe it is the custom, when drawing drafts for goods upon which the 1 per cent discount is allowed, to make this deduction from your draft, which would be alright if the drafts were paid within 10 days, but if not paid within 10 days, then you are allowing too much discount."

Methods Vary

M. D. Creel, credit manager of the Marland Refining Co., outlined in detail his company's method of handling service and bulk station credits. It developed in this discussion that methods of marketing companies vary somewhat in regard to these credits. All agreed that this form of credit had been abused in many instances, with a considerable number taking the position that credit at service stations was not necessary and should be discouraged. The farmer customers were said to compose the class which was demanding a large part of this type of credit. It was pointed out in this connection that jobbers were oftentimes unable to pay the refiner, due to their extensive credit allowances to their customers. For this deplorable situation competitive conditions was given as the cause.

J. M. Judson of the Sinclair Refining Co., gave a well received address on the "Analysis of Financial Statements." He said that in determining the financial condition of a customer or prospect it was necessary to consider it under three heads. The first he termed the "static" condition of the company, second the "dynamic" and third "general business conditions." He valued the first two conditions at 40 per cent each and the latter 20 per cent. The "static" condition of a company he said referred to that usually covered in the formal statements issued by the company. The "dynamic" had to do with the management. He discussed all three divisions in detail citing methods of his own and other companies.

Credit on Lubricants

"The reason why other than cash terms have been granted in the sale of lubricating oils in packages is probably due to the fact that it takes longer to resell it than gasoline and other products for which cash is expected," E. R. Leonard, credit manager of the Mutual Oil Co., Kansas City, said in discussing "Credit Granting on Sales of Lubricating Oils in Packages."

"We believe that terms of 30 days net 1 per cent cash discount in 10 days are reasonable in the sale of lubricating oils. It affords the buyer ample time to prepare himself to make the payment if he pays net and gives him a reasonable premium for prepayment if he wishes to avail himself of the oportunity by paying within 10 days from date of invoice.

"As a matter of practice we all know that extended credit terms are always urged for the reason that competitors are offering the same inducement and in a good many instances an investigation will disclose that a particular customer is trying to work a salesman for more favorable terms and his bare statement has been accepted as fact and it usually develops that the customer is one to whom credit terms of any kind are hazardous.

"However, as stated before, what becomes standard terms is determined by competition and when it is established that one or more of a trade group are granting certain terms there is nothing left for the balance to do but to meet them and the final result as far as the amount of business is concerned is the same as before the terms were lengthened and it increases the cost of doing business of the seller as his invstment in accounts receivable is increased in percentages by practically the amount of the increase in terms."

G. A. Burns, credit manager of the Roxana Petroleum Corp., St. Louis, Mo., also talked on the relationship which should exist between the sales and credit dpartments.

"A credit department functions as a safety check upon the sales department to prevent the taking of such accounts as are doubtful," he said. "You must regard customers not merely as ledger numbers but as human beings upon whom you are depending for the flow of money on which your concern can thrive. The credit man should understand human nature and the salesman can give him a great deal of information along this line."

Gasoline Agitation Urged Upon Senate By Utah Governor

WASHINGTON, D. C. April 19.—Senator W. H. King of Utah, has placed the following letter from Governor Mabey of Utah, in the Congressional Record:

"This communication is addressed to you as part of a nationwide movement against the manner in which the price of petroleum and its products is controlled.

"During last summer and fall considerable agitation existed all over the country relative to the price of gasoline and other petroleum products. Here in this State some investigations were conducted and it was found that gasoline could be sold here with reasonable profit for 19 cents per gallon at the then prevailing prices of crudes. The investigation further proved that the spread between the manufacturer and the consumer is altogether too great. This is due to the fact that the industry has developed an uneconomical system of marketing its products, permitting, in some cases, the extraction of an unreasonable profit. Specifically the product passes through altogether too many hands before it reaches the consumer.

"The agitation and investigations resulted in bringing the price down to 20 cents in this State, but during the last few weeks it has advanced to 25 cents, with prospects of its going still higher. The people are very much incensed over what seems to be an arbitrary raise on the part of the producers and refiners and the manner in which these prices are manipulated.

"It has been decided that our local laws are inadequate to cope with the situation and most of the States find themselves in the same condition. The only immediate hope is that the Federal Government, through the Federal Trade Commission, will take hold of the matter and break up the price-fixing combination which it is very apparent exists.

"Realizing the gravity of the situation and the importance of immediate action, we earnestly request that you make a special effort to find out just what the Federal Trade Commission needs in the way of increased power and additional appropriation to enable it to cope with the great corporations that appear to be controlling prices in this industry and wringing unreasonable dividends from the people out of the products of a natural resource which is rapidly being depleted and which is a common necessity.

"A determined effort on the part of the Government at this time which will result in real action and accomplish something will meet with public favor. May we urge that you do all within your power along this particular line?"

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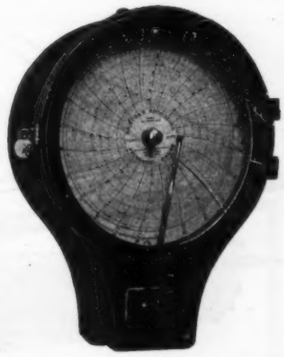

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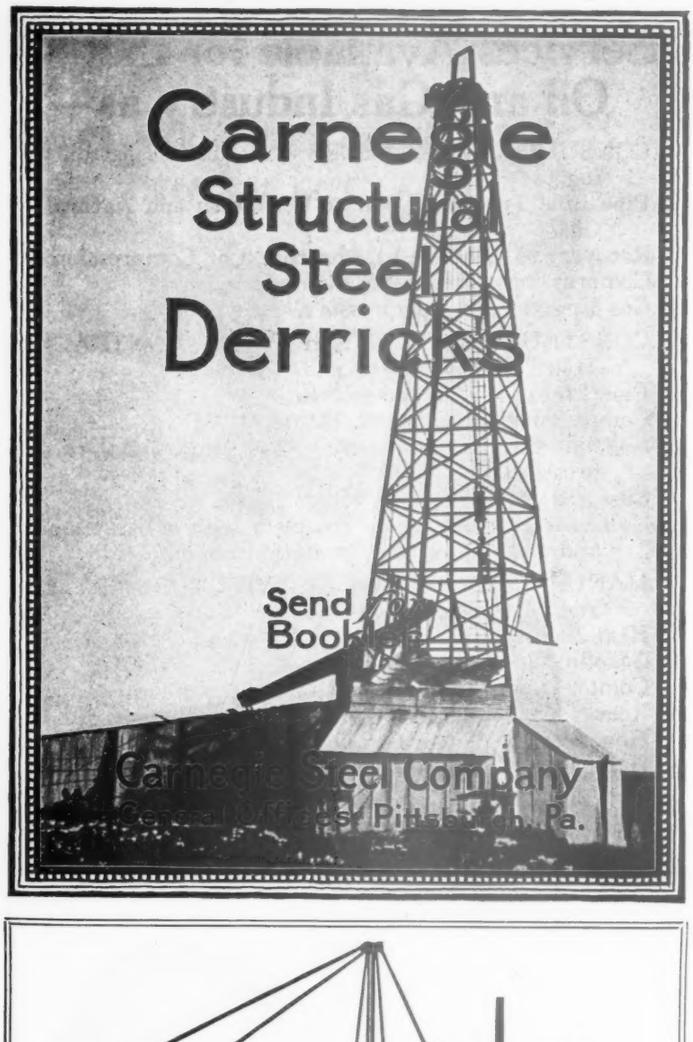

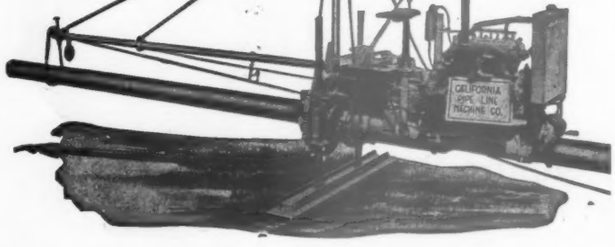

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INQUIRY SHOWS WHY PUBLIC IS PREJUDICED

(Continued from Page 32)

(Didn't know how much.)

2. "Refineries are grafting in my opinion—in fact, I know they are."

3. "Scottsville (25 miles away, same State) is 2 cents higher than here because that fellow is getting a commission."

4. "More graft, though competition has a little to do with it."

Attendant Wants Information
By E. Klappenbach

CHICAGO, Ill., April 19.—The attendant at the first filling station where I stopped laughed at all the questions. He said he owned an automobile and he, too, wondered why prices went up and down. To all the questions, his answer was "I don't know."

At another station, the attendant seemed anxious to offer some explanation. He said prices were higher now than last December because crude oil was higher. He stated he had heard Governor McMaster was selling gasoline at low cost but he also heard that McMaster admitted that his practice was wrong in that he drove out the small independent companies and, in that way, played into the hands of the big companies. He said he was satisfied, also, that the big interests were not behind McMaster. He said he also had heard that prices varied in neighboring States and this, he said, was no doubt due to competition.

In Western Pennsylvania
By C. W. Johnston

OIL CITY, Pa., April 19.—An inquiry conducted in a number of counties in Western Pennsylvania developed the fact filling station attendants, as a whole, are unable to explain even the fundamentals of the changes in prices of gasoline. An exception was found here in Oil City where the man in charge of one station made an effort to explain clearly the reasons for fluctuations in gasoline prices, stating these prices are dependent largely on supply and demand and the price of crude oil. He also explained about the tax in Pennsylvania and the fact that Ohio did not have such a tax.

In Venango County, the man in charge of a station declared there had not been any change in price of gasoline since last December and he gave no evidence whatever of knowing anything about what regulates prices. Although the station is comparatively near the Ohio line, he offered no explanation about differences in prices of gasoline in Pennsylvania and Ohio.

At a garage in Butler County, a mechanic in charge said price increases were a regular thing in summer and spring because there are more cars out and a greater demand.

In Mercer County, the only answer was "Oh, it ain't high yet; you'll pay more before summer is over." He would not continue the conversation.

At a station in Mercer, Mercer County, the attendant made a conscientious effort to explain that supply and demand regulate prices and crude oil prices controlled gasoline prices. He attributed Governor McMaster's action to politics.

At a station in Greenville, Mercer County, the man in charge answered all questions with the statement: "Guess it is because there are more cars running in spring and summer that gasoline prices start up."

In Meadville, Crawford County, the answer was "I don't know. John D., I guess. If he wants to give away another institution, he sticks a cent or two on gasoline."

In Cochranton, Crawford County, a middle-aged man, apparently a partner, said in answer to all questions: "I don't know. The big boys, I guess, did it."

At another garage in Oil City, the man in charge said: "Guess they had to get some money to pay guys like Daugherty and others in the Teapot affair."

In Fort Worth, Texas
By Dan F. Dugan

FORT WORTH, Tex., April 19.—The "I don't know" answer predominated in replies to the four questions asked at filling stations in this vicinity. Many of the attendants, however, knew that the price of crude petroleum governed the price of gasoline.

At one of the large stations in the business district, after he claimed to have absolutely no knowledge as to why gasoline was higher now than last December the attendant stated the reason gasoline prices differed between States was on account of the grade of gasoline sold in one State as compared to the grade sold in another.

Another attendant volunteered the information gasoline costs more now than it did last December because of competition and the law of supply and demand, saying demand was now greater. He declared prices in adjoining States differed because of "the Interstate Commerce law" and State taxes." As to the reason for prices of gasoline being increased or reduced at any time, he said the cost of producing gasoline and crude oil varies.

At another station, the attendant said gasoline costs more now than last December because there is a shortage of gasoline now as compared to last winter.

Much the same answer was given at a station in the residential section, the attendant saying stocks of gasoline in storage now are smaller than they were last December and also that crude oil costs more now. He declared local competition resulted in different prices in adjoining States.

Smackover Another Reason
By M. L. Vaughn

SHREVEPORT, La., April 19.—The fact that Smackover crude oil does not have much of a gasoline content was one reason given why gasoline prices in Arkansas are higher than those in Louisiana by a filling station attendant here. He evidently did not know Arkansas has a State tax of 4 cents a gallon on gasoline. At other stations in this vicinity, the attendants admitted a general lack of knowledge of the reasons why gasoline is higher now than it was last December and why prices are changed at any time. The time-worn joke about "John D. needing more money" was given to me as an answer by one attendant.

OSAGES ASK RESTORED LEASES OFFERED NAVY

PAWHUSKA, Okla., April 21.—The Osage Indian council has asked the Secretary of the Interior to consider as null and void the council's action of 1917 when it asked the Secretary of the Interior to extend to the Secretary of the Navy for use during the World War several sections of Osage Indian land designated as naval reserves.

The council says no oil lease ever has been executed in favor of the Navy and the Navy never has exercised its option. The war emergency has ceased and the tribe seeks to regain full control of the land. The council also asks the Secretary of the Interior to offer the leases for sale in the customary manner.

The smaller reserve is south of the Burbank Field and consists of 12,800 acres in Townships 25 and 26, range, 6, and the larger consists of 22,040 acres in townships 23 and 24 in range 7.

The presumption is if these leases are returned to the Osage nation the leases will be sold in quarter section tracts at sales extending over a period of years the same as the tracts in the Burbank and other Osage County fields.

Increase in Powell Boosts Production Of General District

The North and Central Texas fields averaged 277,919 bbls. production per day in March, a gain of 20,294 bbls. a day over the production for February.

The large increase in Powell due to the wells producing from the deeper sand in the southwest end of the field brought about the general increase.

Wichita County, which in February produced 42,349 bbls. a day, showed a production of 42,732 bbls. in March. Stephens County in February produced 25,581 bbls. in February and 24,648 bbls. in March; Archer County 24,410 bbls. in February and 27,178 bbls. in March; Clay County 302 bbls. in February and 269 bbls. in March; Eastland County 11,741 bbls. in February and 12,170 bbls. in March; Comanche County, 209 bbls. in February and 224 bbls. in March; the Pioneer Pool 2,169 bbls. in February and 2,265 bbls. in March; the Miscellaneous pools 5,404 bbls. in February and 5,576 bbls. in March.

In the East Central Texas area the Powell Pool advanced from 106,360 bbls. in February to 124,847 bbls. in March. Currie fell off a little, showing 3,463 bbls. a day in February and 3,301 bbls. in March and Mexia dropped from 34,737 bbls. in February to 33,809 bbls. in March. Following are the figures:

NORTH AND CENTRAL TEXAS PRODUCTION FOR MARCH

North Texas		
Wichita County—		
Burkburnett	20,676	
Electra	19,335	
Iowa Park and K. M. A.	2,721	42,732
Archer County—		
Holliday	27,178	27,178
Clay County—		
Petrolia	269	269
Total		70,179
Central Texas		
Stephens County—		
Breckenridge	12,163	
Caddo	4,919	
Clear Fork	7,485	
Gunsight	81	24,648
Eastland County—		
Ranger-Eastland	8,882	
Desdemona	3,176	
Rising Star	112	12,170
Comanche County—		
Sipe Springs	224	224
Brown-Eastland-Callahan Counties—		
Pioneer	2,265	2,265
Miscellaneous pools	5,576	5,576
Total		44,883
East Central Texas		
Navarro County—		
Powell	124,847	
Corsicana	900	
Currie	3,301	129,048
Limestone County—		
Mexia	33,809	33,809
Total		162,857
Summary		
North Texas		70,179
Central Texas		44,883
East Central Texas		162,857
Total March		277,919
Total February		257,625
Increase		20,294

RUSSIAN OIL MEN VISIT U. S. FIELDS

B. M. Sajin, technical vice director of the Grozneft Oil Fields, and A. H. Pavloff-Podkopaito, assistant manager of the same corporation, are making a tour of American oil fields, studying American methods of producing, transporting and refining oil. They began their investigations in California, continued them into Texas and this week have been looking over Oklahoma fields under the guidance of Tulsa representatives of the Oil Well Supply Co. Messrs Sajin and Pavloff went from Tulsa to Chicago and after visiting Toledo, Pittsburgh, and New York will sail for Europe by the Atlantic route. Their headquarters are in Moscow and Grozny.

Mr. Sajin says the Grozny Field is producing about 100,000 bbls. a day from over 400 wells. One well in that field which has been producing eight years has had a total output of 11,000,000 bbls. and is still good for 3,000 bbls. a day. There are about 70 wells drilling in the field.

Strike in Montana May Open Big Area To Oil Prospectors

By F. B. Taylor

CASPER, Wyo., April 19.—An interesting strike was reported in the Watson Oil Co.'s well on the James Hughes ranch, near Conrad, Pondera County, Montana. This hole has been drilling for some time and the scouts had about given up hope that it would find production as the well had passed through all known producing horizons. This well is now drilling below the Madison lime around 2,800 feet and is in the Devonian formation.

At 2,760 feet, the well found a sand 32 feet thick in the base of the Madison lime and this sand was saturated all the way through with oil of good grade. After standing for a time the crude filled the hole to a depth of 60 feet but was not considered to be a commercial well unless a shot would increase the production considerably. Drilling is to be continued to make a complete test of the Devonian if possible.

Because of this finding of oil in the Madison, the deep wells that are to be drilled this coming season at Sunburst and at Cat Creek are going to be interesting to the oil men. Two deep tests are slated for Cat Creek and three in the Sunburst Field. The Sunburst Field lies about 35 miles north of the well at Conrad.

CALIFORNIA RECEIPTS AND PETROLEUM IMPORTS

Receipts of California crude and refined oils at Atlantic and Gulf Coast ports for the week ended April 12, totaled 1,120,000 barrels, a daily average of 160,000 barrels, against 903,000 barrels, a daily average of 129,000 barrels for the week ended April 5.

	Wk. End. April 12
At Atlantic Coast Ports:	
Baltimore	75,000
New York	892,000
Philadelphia	153,000
Total	1,120,000
Daily average	160,000
At Gulf Coast Ports:	
Total Atlantic and Gulf Cst. Ports.	1,120,000
Daily average	160,000

According to figures collected by the American Petroleum Institute, imports of crude and refined oils at the principal ports for the week ended April 12, totaled 2,153,000 barrels, a daily average of 307,571 barrels, compared with 2,123,000 barrels, a daily average of 303,286 barrels for the week ended April 5.

	Wk. End. April 12
At Atlantic Coast Ports:	
Baltimore	135,000
Boston	140,000
New York	309,000
Philadelphia	162,000
Others	225,000
Total	971,000
Daily average	138,714
At Gulf Coast Ports:	
Galveston district	515,000
New Orleans and Baton Rouge	552,000
Port Arthur and Sabine district	115,000
Total	1,182,000
Daily average	168,857
At all U. S. ports:	
Total	2,153,000
Daily average	307,571

BRITISH SEPARATOR PATENT

A new British patent has been granted to Vickers, Ltd., and Sir James McKechnie, for an invention for separating oil from water. A closed tank receiving the oil and water, usually under a small head of liquid, is provided with internal vertical walls or partitions forming channels communicating with each other through suitable apertures or openings so arranged relatively to directing baffles or walls that, as the contaminated water passes from the inlet to the discharge end, it takes a ciruitous course, during all stages of which the oil is allowed to gravitate to the top of the liquid and to accumulate under the closing top or cover of the tank, which directs it towards a collecting space from which it is drawn or pumped off.

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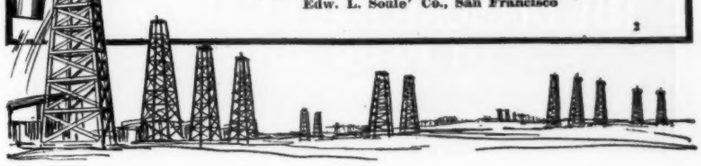

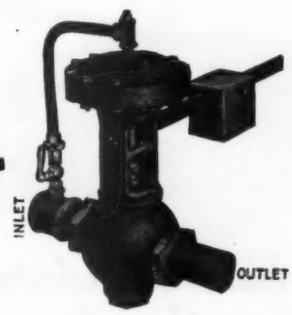

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LAST MINUTE *from* OKLAHOMA

The best producer yet to be found in the Gilcrease area of Hughes County came in Tuesday and was variously estimated to be making from 60 to 80 bbls. of 39.3 gravity oil with the bit about 2 feet in the sand, reached at 3,100 feet. It was the Arkansas Fuel Co.'s No. 1 Brown, SE cor. NE, Section 18-9-9. A late report from an authoritative source stated the sand had been penetrated 6 feet and the well was flowing about 70 bbls. hourly. This gusher is three-quarters of a mile northwest of the Gilcrease Oil Co.'s No. 1 Simon, the sensation of the latter part of last week which was good for 30 bbls. an hour and was holding up to that figure.

The Hewitt Field brought forth another flowing well from the deep horizon, the Wolverine Oil Co.'s No. 85 Dillard, C SE NW SW, Section 22-4s-2w, having topped the sand at 2,988 feet and found first oil at 3,003 feet. At total depth of 3,010 feet, the flow amounted to 496 bbls. in the first 22 hours, and the gauge for April 20 was 330 bbls. The same company was drilling its No. 93 Dillard, C SW NW SW, same section, at 2,710 feet in blue shale, and was rigging up standard tools at 2,713 feet for No. 112 Dillard, C SE NE SE, Section 21-4s-2w.

In the Burbank Field, another well offsetting the high-powered tract of the Midland Oil Co., the record-priced Burbank lease, has made a small producer. It is the Sinclair Oil & Gas Co.'s No. 10, NE cor. SE NE, Section 16-27-5, and was shot four times with a total of 75 quarts, producing only 100 bbls. afterward from sand at 3,020-72 feet.

There were 101 wells drilling and 40 rigs building or in place on the Burbank tracts purchased at the Osage lease sale last month. More than 50 of the drilling wells were below 1,000 feet.

The Carter Oil Co.'s No. 3 Pappan, NW cor. SW NW, Section 3-27-5, produced 1,355 bbls. the first 24 hours from sand at 2,875-2,921 feet.

Late Fields

KANSAS

In Greenwood County, Miller and others' No. 4 Hellman, CEL NE SW, Section 14-24-9, in the Agard district, was shot with 140 quarts and responded with 100 bbls. from sand at 2,140-2,201 feet. Total depth was 2,211 feet. The Derby Oil Co. had a 100-bbl. well after a shot of 100 quarts in san dat 2,395-2,486 feet, in its No. 11 Moss, CSL N half NW, Section 30-25-9. The pay was topped at 2,440 feet. Shawver & Sutter abandoned their No. 1 Henry, NE cor. SW, Section 6-26-9, at 2,607 feet, after topping the lime at 2,420 feet. Marshall shut in No. 2 Duke, CSL SE SE, Section 22-26-9, for 2,000,000 feet of gas in sand at 868-69 feet.

R. G. Gillespie had a show of oil in his No. 1 Bangs, CWL SW NW NW, Section 16-22-10 at 2,251 feet in sand at 2,236-88 feet, but topped the lime at 2,352 feet and abandoned the test as dry at 2,441 feet. Rhodes and associates had a 100-bbl. producer following a shot of 100 quarts in their No. 3 Browning, SW cor. NE, Section 17-22-10. Sand was found at 2,292-2,331 feet, with first oil at 2,315 feet. The same interests' No. 4 Browning, NE cor. SW, same section, was making 75 bbls. of oil and 25 bbls. of water after a 100-quart shot in sand at 2,316-58 feet. Fisher, Locke & Moore abandoned their No. 2 Edwards, C NW NE SW, Section 8-23-11, as dry at 1,966 feet after a 100-quart shot which failed to produce results. The well had two showings of oil, one at 1,898-1,903 feet, and the other at 1,915-28 feet.

The Theta Oil Co.'s No. 16 Schneider, CSL NW, Section 10-23-13, was a small producer, being good for 20 bbls. after a 40-quart shot in sand at 1,592-1,618 feet. The Arkansas Fuel Co. abandoned as dry at 2,340 feet its No. 1 Sander, SE cor. NW, Section 20-23-13. It found the second break in the lime at 2,300 feet.

Elk County

Elk County produced some gassers. Wilson & Phillips having shut in their No. 3 Harris, C NW NW, Section 27-29-9, good for 10,000,000 feet of gas in sand at 1,432-54 feet. The Ohio Fuel Oil Co.'s No. 1 Harris, C SE NE, Section 28-29-9, made 15,000,000 feet of gas from sand at 1,554-72 feet. Hunt Croff plugged back No. 1 Davy, CEL SE SE, Section 18-30-9, from 2,450 to sand at 1,800-08 feet, where it made a 2,000,000-foot gasser. Mitchell and others had timbers on the ground for their No. 1 Eastman, C NE NE, Section 33-29-9, and timbers were also on the ground for Detrick and others' No. 1 Schul, CEL N half N half SW, Section 27-30-9. Lydic and others had a machine in place to drill for gas in their No. 1 McKirechen, C NW NW, Section 34-29-11. Laskey & Rhodes also had a machine in place for their No. 2 Fleak, CEL NE SW, Section 21-30-11.

Some additional new western tests reported included a location in McPherson County by Benson & San for No. 1 Lindquist, NE cor. NW, Section 29-20-5w. In Rice County, the Prairie Oil & Gas Co. staked a location for its No. 1 Miller, NE cor. NW SW, Section 35-20-6w. In Lincoln County, the Amerada Petroleum Corp.'s No. 1 Jelison, NW cor. SE, Section 19-13-9w, was a location. In Russell County, Buhl and associates located their No. 1 Withner, NE cor. Section 1-14-11w, and the Skelly Oil Co. also located its No. 1 Bear, NW cor. NE, Section 13-12-14w. In Barton County, a location was made by Jasper and others for their No. 1 Decha, SE cor. NW, Section 11-16-12w, and in Ellis County, a new location was staked by Harvey and others for their No. 1, SE cor. NW NW, Section 18-13-17w.

In southeastern Montgomery County, a location has been made for Burton, Keith & Welker for their No. 1 Burton, SE cor. NE, Section 4-35-17, about 2 miles southeast of the Lamb Pool by the Red Bank Oil Co. late last year.

TEXAS ANTI-TRUST SUITS CALLED TODAY

AUSTIN, Tex., April 22.—The trial of the State of Texas antitrust suits against the Gulf Refining Co., The Texas Co. and the Producers Oil & Refining Co. of Missouri for charter forfeiture, penalties and injunctions, was today called for Thursday of this week in Travis County District Court. The cases, all involving an identical charge, will be tried concurrently on application of Attorney General W. A. Keeling. Harry Bickler, official court reporter, was named special commissioner to take the testimony in the cases.

The trial before district Judge George Calhoun will be on law issues. The companies are charged with violation of the antitrust statutes through securing contracts with retailers for exclusive sale of their products in exchange for lease at a low cost of filling station equipment. Judge Calhoun recently upheld the Humble Oil & Refining Co. in the antitrust suit brought against it, alleging violation of the statute because of majority ownership of its stock by the Standard Oil Co. of New Jersey, a banished corporation.

REVOKING OSAGE SUSPENSION

The commissioner of Indian affairs has notified the Osage Oil and Gas Lessees' Association that the Department of the Interior contemplates revoking the suspension of the drilling obligation in Osage leases and has set May 12 as the date when the association and the operators will be heard in Washington in opposition to the proposed revocation.

Mutual Difficulties Of Oil Producers And Natural Gasoline Men

By I. P. Parkhurst
Empire Gasoline Co.
Read before the Association of Natural Gasoline Manufacturers

If the natural gasoline industry is to continue its development or even to endure, it is essential that the relations between the oil producer and the gasoline manufacturer, be pleasant and profitable to each.

For any favorable project, there is obviously a fair price or schedule which will enable both the oil producer and gasoline manufacturer to make fair profit on the casinghead gas. This fair price may be different for different fields and conditions. The gas from all leases in a field should be purchased on the same schedule, if it has similar characteristics and is similarly located.

There is quite a difference in the attitude of producers on the selling and delivering of casinghead gas. Some consider the sale of casinghead gas a nuisance, and is the nature of an accommodation, when it is in fact a business proposition, and a contracted obligation.

Many other producers consider the sale of casinghead gas very profitable. Observations show that the company which makes no effort to deliver a maximum amount of gas or does not care to cooperate with the gasoline manufacturer derives relatively poor profits. On the other hand the producer who endeavors to deliver as much gas as possible, and is willing to cooperate with the manufacturer almost always derives a very substantial profit compared to the total net profit derived from the operation of the lease.

Long term contracts for the purchase of casinghead gas are almost essential to the natural gasoline manufacturer, and desirable to the producer, as the manufacturer must have contracts of sufficient term to enable him to retire his investment and make a fair profit considering the hazard. Long term contracts will justify the manufacturer in installing the best of equipment and lines, and thus insure better service to the producer.

A large proportion of the total casinghead gas from a well is produced within a short time after it is drilled in. It is desirable by both producer and manufacturer, to extract the gasoline from as much of this flush gas as possible, but the manufacturer cannot be expected to install any more equipment to handle flush gas than is justified by the probability of his retiring his investment and making a reasonable profit.

The gasoline manufacturer offers the producer a steady market for his casinghead gas, otherwise wasted. The producers should not, in justice to himself, other producers, or the gasoline manufacturer, expect to retain raw gas for fuel except in emergencies. If the supply of residue gas is inadequate for his lease operations, he should provide some fuel other than raw casinghead gas to make up the deficiency.

It is common practice for the gasoline manufacturer to return sufficient residue gas for efficient oil lease operations, providing the amount does not exceed the amount of casinghead gas delivered to the gasoline plant, less the amount of gas condensed as gasoline, and the proportionate amount of fuel gas required for gasoline plant operation. In fields where the residue gas available for return to the oil producer is limited, it becomes a very serious problem. It is only fair in such cases that both the manufacturer and producer eliminate all gas waste and install equipment which will give reasonable efficiency in the burning of the residue gas. This calls for such items as low pressure, well-designed burners for boilers, proper gasometers, the elimination of flambeaux and flares, and the heating of fuel lines for leakage, etc.

The oil producer should expect to exercise as much foresight in the layout and size of his residue system as the gasoline manufacturer exercises in the installation of his great gathering system. It is customary for the degree of pressure or vacuum to be had on the wells to be under the control of the producer, and the manufacturer furnishes suitable regulators. The operation and adjustment of the regulators should be entirely in the hands of the manufacturer who is responsible for the maintenance of the vacuum or pressure desired to the producer.

Cooperation Needed Between Producers And Manufacturers

By D. B. Dow
Read before the Association of Natural Gasoline Manufacturers

The natural gasoline industry has experienced an enormous growth in only a few years. The Geological Survey's latest figures show the production of natural gasoline amounted to approximately 500,000,000 gallons in 1922, having a value of approximately $70.000,000. This was obtained from 545,000,000,000 cubic feet of gas, and represents about 8 per cent of the total gasoline produced in the refineries of the United States.

Viewed from the standpoint of conservation of our national resources, the industry occupies an enviable position, for by its efforts this enormous amount of gasoline is saved, which otherwise would have been largely wasted

There are numerous minor points that affect the relationship between the producer and manufacturer. The application of vacuum pumping in stimulating the production of wells has been utilized to a large exent and frequently arrangements are made whereby the gasoline manufacturer supplies the vacuum service to the producer. Such an arrangement should be desirable from the standpoint of both parties, since the manufacturer generally obtains a somewhat richer gas, and the producer is not only benefited by increased oil production but also receives gas under sufficient pressure for operating purposes.

Since an oil producer is in the business of oil production primarily, he has a very just complaint if his vacuum service is of such nature that it injures production. On the other hand the gasoline manufacturer cannot be expected to supply a satisfactory service if the service is impaired by conditions over which he has no control. The producer should realize that if his supply of gas to the manufacturer is intermittent, the plant may be so affected it in turn gives an intermittent vacuum service.

The producer is responsible for the condition of his own equipment such as the casing and casinghead. Leaks lower the vacuum on the well and it is impossible for the plant operator to remedy the situation since maintenance of the well equipment is outside his province. Such a condition not only affects the oil production but also, due to the liluting effect of the air in the gas, a very positive effect is evidenced in reducing the plant production and plant capacity. In such cases the gasoline manufacturer should require the producer to remedy the situation, and if this is not done the producer has no logical complaint if the plant operator cuts out the offending well. Obviously under such circumstances each party must meet the other half way if a pleasant relationship is to exist.

The measurement of volumes and gasoline content of the gas is a frequent cause for dispute. Due to constantly changing conditions, inaccuracies are bound to occur. The producer does not expect the buyer to make a daily check on the accuracy of the meter or on the variance in gasoline content. He does, however, expect tests at frequent enough intervals, so inaccuracies may be corrected, thus striking an average that is equitable.

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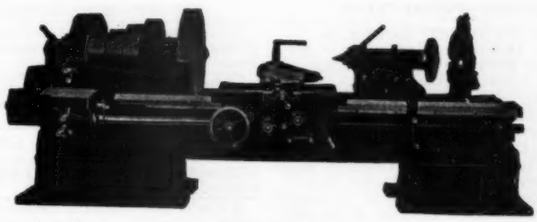

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24x10 American	4-spdl. Henry & Wright	72x60x36 Cincinnati
30x20 American	6spdl. Allen	**Milling Machines**
36x30 Pittsburgh	**Vertical Boring Mills**	No. 1 Kempsmith Universal
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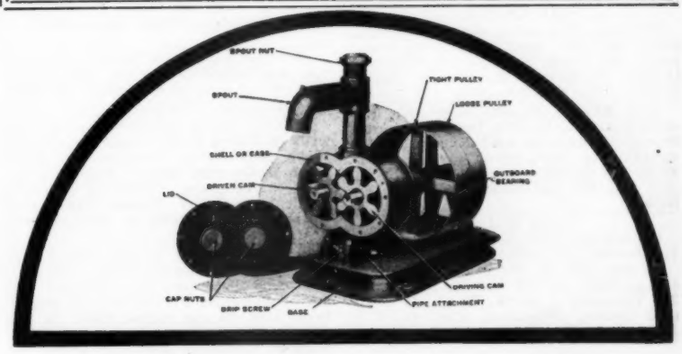

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Have some good leases in Ellis and Rush Counties, Kansas, for sale. W. J. Madden, Hays, Kans.

80 ACRES—Jefferson County; new fields; surveyed structure; near production; also, block of good stuff for small bonus and immediate drilling. J. G., Box 153, Ringling, Okla.

FOR SALE—Leases on structure; quarter mile of drilling well; Dennison Township, Lawrence County, Illinois. J. E. Bauer, 208 LaPlatte Bldg., Vincennes, Ind.

FOR SALE—At bargain prices, oil and gas leases, production and royalties in the Kentucky shallow fields. For full particulars and maps, address W. P. Harley, Bowling Green, Ky.

WEWOKA—Oklahoma's newest oil field; have high class or cheap leases and royalties for sale, in Seminole, Pottawatomie and Lincoln Counties. W. R. Turner, 2123 Warren Ave., Chicago, Ill.

FOR SALE—Northern Colorado oil leases. We own and control attractive oil and gas leases and royalties on structure. For information or particulars write or wire, John W. Wilson & Co., Craig, Colo.

85 PER CENT oil and gas lease; Government permit; 120 acres; Kevin-Sunburst Field, Montana. Must start drilling June 15; $50 per acre; 1 mile from producer. Address C. E. Foster, 1204, Second Ave. South, Great Falls, Mont.

OIL LEASE

Oil lease, 140 acres; derrick erected; boiler installed; short funds; Arkansas. Also, 160 acres for sale in Choctaw County, Oklahoma, R. H., 80 North Chester Ave., Pasadena, Cal.

FOR SALE—200-acre lease with five wells located in Douglas County, Kansas. Several offsets to be drilled against wells on adjoining lease, which came in from 25 to 150 barrels. Address Box X Y Z, care The Oil and Gas Journal, Tulsa, Okla.

FOR SALE

Oil and gas right, NE quarter, Section 21, Township 1 north, Range 11 east, Surface and oil and gas rights, either one or both, of NW quarter of Section 24, Township 1 north, Range 11 east, Coal County, Oklahoma. Octo Oil Co., 21-25 West Main St., Cuba, N. Y.

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(Marathon Fold)

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COAL, GAS AND OIL LANDS

Will sell 120 acres patented land, in Rio Blanco County, Colorado, for $150,000; not leased; clear title to same; good location in field; underlaid with coal of finest quality; measures 47 feet and possibly more as shaft has never been sunk. Two tunnels straight in the mountain 350 feet. A million dollars worth of coal in sight. A good 25-barrel shallow oil well in sight. Small refinery has been running this crude. If interested and mean business, write Box A-176, care The Oil and Gas Journal, Tulsa, Okla.

LEASES—PRODUCTION

LAND to lease for oil drilling, in old oil survey. Mrs. W. R. Singleton, Talco, Texas.

SUBMIT me your acreage near drilling wildcats. E. V. Wilson, Cotton Exchange, Fort Worth, Texas.

NEAR TONKAWA, 160 acres; Section 7, Township 24, Range 1w, for lease. Address George M. Stull, 1424 South Sanfernando Road, Glendale, Cal.

BALCONES FAULT leases and royalties in active locality northeast of Powell. Frank Poorman, 3215½ Ross Avenue, Dallas, Texas.

THE RIGHT SPOT—Place one bet in Cumberland County, Kentucky. Good leases can be bought reasonable. Write Richardson & Goff, Columbia, Ky.

640 ACRE oil and gas lease for sale; Section 5, Block D-10, Terrell County, Texas; sell cheap. What will you offer? 1514 Chestnut St., Chattanooga, Tenn.

KENTUCKY oil and gas leases for sale near production; drilling wells and on good structure. Write me for map and description. F. L. James, Box 194, Edmonton, Ky.

METCALF COUNTY, KENTUCKY

Will give to right parties half interest in 50 acres for a well. This land is part of Bell lease, and adjoins 100 acres on which are two commercial wells of 40 gravity oil, brought in at 300 feet. A. W. Richards, Edmonton, Ky.

Production
Drilling Blocks
Leases and Royalties
Geological Value Given Preference
J. M. Allen
902 Petroleum Bldg., Tulsa, Okla.

IF I had my Wants listed in this section they would receive the same attention that thousands are giving the good advertisements already here.

TEXAS oil leases close to drilling wells in Luling Field, Guadalupe, Bexar, Webb and Medina Counties. Standard Form 88 five year leases. Much development taking place. Write for map and particulars. L. W. Stieren, 815 Alamo National Bank Building, San Antonio, Tex.

I HAVE wildcat acreage for sale in vicinity of well located by the same geologist who discovered the Sayre oil field and recommended by him to be as safe an investment as the Sayre Field. I can sell for $2 per acre and up. Dr. W. R. German, Canadian, Tex.

METCALF COUNTY OIL LEASES

I own several very desirable leases near production, shallow drilling, 220 to 400 feet; production 5 to 20 barrels daily; high gravity oil, which I offer to the right parties on very easy terms. A. W. Richards, Edmonton, Ky.

OIL MAN OR INVESTOR—160 acres of soft farm land in "Imperial County," California; 1½ miles from railroad station; water in about 25 feet; fine for grapes; patented, including "oil right;" not far from "prospect well." For sale cheap by owner. Address John N. Bodendick, P. O. Box 471, Arcade Station, Los Angeles, Cal.

FOR SALE—A 220-acre tract in the Trenton Rock Field, Ohio; surrounded by good wells, at $20 per acre. Also have 1,200 acres in same field in which will give half interest to party drilling one well.

Wells are less than 1,200 feet deep and can be drilled for $2,000.

Also have production and acreage in Allen County, Kansas for sale.

Also wells and acreage on drilling contract in Okfuskee County, Okla.

Also 1,000-acre lease in Caddo Field with over 200-bbl. production.

Also leases in North and South Dakota. Also a lot of iron in two wells in Oklahoma, as good as new.

Also a 2,000-bbl. capacity refinery in Oklahoma. U. M. Shappell, Lima, Ohio.

LEASES—PRODUCTION

WISH TO SELL royalty and fee, 480 acres Butler County, Kansas. Two small wells. Leased for drilling. Make me an offer. Address, Box B-C,, care The Oil and Gas Journal, Tulsa, Okla.

KENTUCKY oil lease for sale in Metcalf and Barren Counties; both proven and semiproven acreage; will sell for less money than you can buy elsewhere. Write for map and descriptions. Albert James, Edmonton, Ky.

HAVE 60-ACRE oil lease in Nowata County, Oklahoma, with 10 barrels production; selling few sixty-fourth interests at $200 each, to drill three more wells. Fletcher P. Walker, Box 437, Ponca City, Okla.

FOR SALE—Oil lease in Logan and Kingfisher Counties, Oklahoma. New developing field; five wells going down; real activity; four big oil companies have blocks ready for locations. Waite Phillips, Roxana Petroleum Corp., Jens Marie, Prairie Oil & Gas Co. Others blocking. H. M. Godfrey, Crescent, Okla.

GUARANTEED OIL PRODUCTION

No Oil No Pay
Consult Us Before Drilling

STERLING OIL PRODUCERS
209-10 Bliss Bldg., Tulsa, Okla.

FROM NOW ON, when I want to do business with the real men of the petroleum industry, I'm going to put my advertisement right here in this Classified Wants Section.

TEXAS LEASES

We have many Texas County leases. Guadalupe County, $3 an acre; Medina County, 50 cents; Zapata, $1.25; Pecos, $1; Bandera, 40 cents; Blanco, 15 cents; and many other counties. All new five-year Form 88 standard leases. Write for maps and full particulars.

GULF REALTY CO.
281 Bedell Bldg. San Antonio, Texas.

DON'T GET EXCITED

This is not Track 626, Burbank; it's more. 630 acres in fee; well checkered; 40-, 80-, 160-acre tracts and you can see real production from any of them; 11-7-12-8, 12-9 and 13-9 country, Okfuskee County. This is an estate heirs have consented to sell, retaining one-fourth oil, gas and mineral rights; some big boys are after top leases. If you take it all, $150 per acre, some term. H. L. Wallis, 1801 West 34th St., Oklahoma City, Okla.

10c AN ACRE

We have many leases in counties surrounding San Antonio, along the Balcones Fault and along the Marathon Fold in West Texas which we are offering from 10 cents an acre up. Here are a few of them:

Guadalupe County	$3.00 an acre
Pecos County	$1.00 an acre
Medina County	50c an acre
Gillespie County	10c an acre
Kerr County	25c an acre
Atascosa County	$2.00 an acre
Karnes County	$2.00 an acre
Zapata County	$1.25 an acre
Bexar County	$3.00 an acre
Hays County	30c an acre
Sterling County	$1.00 an acre
Coke County	$1.00 an acre
Irion County	$1.50 an acre
Bandera County	40c an acre
Wilson County	$3.00 an acre
Comal County	35c an acre
Travis County	35c an acre

The above prices are in 10-acre tracts. Prices are even less in larger tracts. All leases are standard Form 88, five-year leases and most of them are brand new leases. All of the above leases are on hand and delivery can be made immediately. Write for particulars and maps. No obligation.

GULF REALTY COMPANY
280 Bedell Bldg. San Antonio, Texas

LEASES—PRODUCTION

PRODUCING Royalties in Texas bought and sold. J. F. Marion Co., Magnolia Bldg., Dallas, Texas.

FOR PANHANDLE oil leases near drilling wells at $2 an acre, write Dr. W. R. German, Canadian, Texas.

10,000 ACRES—Have solid block. Want responsible parties to drill. Position to deliver leases now. This is in new oil field. Welch No. 1, Rice County, Kansas, adjacent. Address D. J. Fair, Sterling, Kans.

LEASE!—Will give five-year commercial lease on the following: Creek County, NW quarter 2-18-8; Pittsburg County, SE quarter, NE quarter 31-7-15; Washington County, E half, SW quarter, NW quarter and NE quarter, NW quarter, SW quarter 16-29-14. Submit best offer with reply. No brokers. Owner, P. O. Box 631, Oakland, Cal.

IF I had my Wants listed in this section they would receive the same attention that thousands are giving the good advertisements already here.

ROYALTY

Will sell half of one-eighth royalty interest in 840-acre tract; 20-year lease, in Rio Blanco County, Colorado; 14 years to run, for $50,000.

There is a well on this tract 1,700 feet deep with oil in hole. This hole was lost through carelessness, dropping 200 feet of 10-inch casing.

Deep test to be started this summer; 54 gravity oil. Offer will be withdrawn when well comes in. Write Box A-177, care The Oil and Gas Journal, Tulsa, Okla.

OKLAHOMA

Jefferson County—acreage at $10 up. New discovery well here.

Payne County—40 acres; Section 4-19n-1e; $50; well drilling 1 mile.

Texas:

Moran Shallow Field—80 acres; $55; drilling within one-half mile; production three-quarters mile.

Ellis County—Block in NE corner; well to go down soon. Inquire about geological information on this. Can deliver small and larger tracts.

Carson County—Well drilling on this block. North of Panhandle few miles.

TEXAS-OKLAHOMA LEASE CO.
1418 Kirby Bldg.
Dallas, Texas

FOR SALE—EQUIPMENT

BOILER TUBES—Regular standard new steel 3-inch by 8-foot boiler tubes at extremely low prices; less than it costs to manufacture. The U. S. Tool & Supply Co., Steubenville, Ohio.

STANDARD RIG Owners Attention: List your rigs, tools and casing with us for delivery into New Mexico. Kaufman Co., 129 W. Second St., Los Angeles. Branches: Gallup, N. M., and Farmington, N. M.

IT'S

REALLY A TANK

WITHIN A TANK

THE NEW M & V GUNBARREL

One part separates oil and water automatically.

The gas has its own compartment in top of tank.

You can see wells produce without losing the gas.

It's really automatic. No valves or cocks to open or close.

Welded construction. No leaks or seeps.

Made of heavy rust-resisting copper steel sheets.

It's positively efficient, durable and fool proof.

M & V TANK CO.
Wichita Falls,
Texas

25 CENTS per line first insertion; 15c per line each additional insertion. Cash in advance.

CLASSIFIED WANTS

MAIL your advertisement now. It will be published next week. Cash with order.

FOR SALE—EQUIPMENT

FOR SALE—Standard rig and good string of big hole drilling tools; nearly new; drilled less than 500 feet; bargain for cash. Box 42 Gillham, Ark.

NEW MACHINERY

Eight 45-h. p., field boilers; nine 11½x12 Ajax type engines. Address J. S. Schofield's Son's Co., Macon Ga.

FOR SALE—Standard string of tools; bits up to 20-inch; two boilers with fishing tools; located near Choteau, Mont. A bargain for cash. F. M. Gray, Jr. Co., 390 Third St., Milwaukee, Wis.

FOR SALE

Complete string of cable tools; 40-horsepower Lucey Boiler; 12x12 Oilwell Engine; bits from 18-inch to 6⅝-inch. Real bargain. J. R. Hill, 1613, F. & M. Bank Bldg., Fort Worth, Texas.

ELECTRICAL MACHINERY

We offer electric motors, all sizes, at about one-half regular prices. We buy motors and power machinery. Write us for anything electrical. J. V. Wallace Co., Inc., 11 Wall Street, Schnectady, New York.

FOR SALE—One 75-h. p. Bessemer gas engine; one 12x16x12 Laidlow compressor, used less than two years; one No. 26 and one No. 36 Star drilling machines, complete with tools; good as new. R. W. Russell, St. Marys, W. Va.

TANK CARS

30 Class III—100.000-Gallon Capacity 7,000-gallon, all-steel construction; immediate shipment; bargain price. In stock for immediate shipment, cars of any kind, both passenger and freight.

HOUSTON RAILWAY CAR CO
Houston, Texas

ONE D Special Advance Drilling Machine, complete with drilling and a lot of extra fishing tools included. Also, one C Advance Drilling Machine, complete. I will make very attractive prices for purchaser taking same at once. Address R. E. Wyland, Casey, Ill.

GRAY IRON CASTINGS
Inquiries for Prices
Appreciated and Prompty
Answered
LAURELTON FOUNDRY CO.
Laurelton, Pa.

PIPE LINE PUMPS

Two entirely new, never used; size 14"x40"x6½"x36" horizontal, cross compound steam pumping engines; capacity, 35,000 bbls. per 24 hours. Will sell at less than half present cost. Wire or write for details. Address Box A-164, care The Oil and Gas Journal, Tulsa, Okla.

FOR SALE

150 FEET 15½-inch casing; 900 feet 12½-inch 50-pound; 1,000 feet 10-inch, 40 pound; 2,700 feet 8¼-inch, 32-pound, 8-thread. J. & L. Woodlawn. Special, 3,200 feet 8¼-inch, 28-pound casing; 3,400 feet, 6¼-inch, 24-pound, 10-thread; J. & L. Woodlawn Special new thread protectors on all. J. F. Arnold Co., Decatur, Ind.

100

NEW, USED AND REBUILT GAS ENGINES

Must be sold promptly. Prices one-fourth to one-half price of new. Any reasonable offer will be accepted. High grade commercial engines; sizes 1½ to 500-h. p. Foos, Miller Improved, Bruce-MacBeth, Bathburn-Jones, Nash, Fairbanks-Morse, Reeves, Westinghouse—all makes; high grades. Can be fitted up to drive pumps, compressors, electric generators, pumping oil wells, etc. Also high grade oil engines, semi-Diesel and Diesels. Reason for selling. We want to push our heavy oil engine for all kinds of work. Write or wire your requirements.

INTERNATIONAL ENGINE CO.
Central National Bank Bldg.
Marietta, Ohio.

FOR SALE—EQUIPMENT

FOR SALE—No. 26 Star drilling machine and complete string tools; A-1 condition. N. F. Hughes, R. F. D. 2, Oxford, Ohio.

FOR SALE—Two 45-horsepower Charter gas engines; in good repair. Address Box A-191, care The Oil and Gas Journal, Tulsa, Okla.

FOR SALE—No. 28 Star Drilling Machine; complete set of tools and boiler in first class condition. L. K. Spielman, Chanute, Kans.

1,000-FT. ARMSTRONG gas traction drills; immediate delivery into New Mexico shallow fields. Kaufman Co., 129 West Second St., Los Angeles. Branch office: Farmington, N. M.

ONE ROTARY outfit, Johnson Louisiana pattern, with draw-works, 12x12 Ajax engine, Acme boiler, 2,400 feet drill pipe, two pumps, cable, miscellaneous tools; only drilled four wells; imemdiate shipment; price $5,500. Burnley Machinery Co., 324 Liberty National Bank Bldg., Oklahoma City, Okla.

COUPLINGS

500—12½-inch, 8-thread, new casing couplings.

National Etna, J. & L.
Price, $5.50 each, f.o.b. Ranger, Texas.
LONGHART SUPPLY CO.
608 First National Bank Bldg.
Fort Worth, Texas

DRILLING MACHINE

FOR SALE—No. 5 Keystone Special; in good shape, with tractor equipment and tools; located in 21-18-16, Coweta Field. Can be bought at a bargain and on favorable terms. J. L. Haner, Muskogee, Okla. Telephone 467.

TANK BOLTS

SAME-DAY SHIPMENT

⅞x¾-inch, ⅝x⅝-inch, ⅝x1-inch, ⅝x1¼-inch, ½x1-inch.
Write or wire for quotations

STEEL MFG. & WAREHOUSE CO.

1447 Genesee St. Kansas City, Mo

FOR SALE

Two No. 5½ Keystone Tractor Drilling Machines; steam.

One No. 19 Armstrong Special Tractor Drilling Machine; gasoline.

One No. 23 Star Drilling Machine; steam.

One No. 30 Sparta Tractor Drilling Machine; gasoline.

All the above machines have complete string of tools.

We also manufacture all kinds of drilling and fishing tools and fishing tools for rent.

WRIGHT TOOL CO.
Bowling Green, Ky.

The Classified Rates are attractive. It costs but 25 cents the line for the first insertion and 15 cents the line for each additional insertion. Six words usually make a line. Cash with the order.

This useful table will help you to figure the cost of Classified Advertising in The Journal. Keep it for reference:

	One Time	Two Times	Three Times	One Month
3 lines..	$ .75	$1.20	$1.65	$2.10
4 lines..	1.00	1.60	2.20	2.80
5 lines..	1.25	2.00	2.75	3.50
6 lines..	1.50	2.40	3.30	4.20
7 lines..	1.75	2.80	3.85	4.90
8 lines..	2.00	3.20	4.40	5.60
9 lines..	2.25	3.60	4.95	6.30
10 lines..	2.50	4.00	5.50	7.00

INCORPORATIONS

DELAWARE incorporator. Charters; fees small; forms. Charles G. Guyer, 901 Orange St., Wilmington, Del.

YOU WILL always be right in reading this Classified Section, as it is the best Petroleum Publication Classified Section in the world. It will help you.

FOR SALE—REFINERIES

FOR SALE OR LEASE—One of the best built small refineries in Texas, located at Wichita Falls, Texas, about 1,200 barrels capacity; fully equipped and ready to run; all in first class condition. Will lease to responsible parties or sell on easy terms. Address, Jonas Kizer, Dan Waggoner Building, Fort Worth, Texas.

REFINING PLANT of American Refining Co., a bankrupt; building site, 24 acres; substantial brick buildings; riveted steel tanks; storage capacity about 12,000 bbls.; pipe still 500 to 750 bbls. daily capacity; chemical treating system; all complete, in first class running order; has been making highest grade gasoline. Good reputation established; large local demand. Approximate cost of plant, $90,000. Must be sold to satisfy creditors. Send in your bid. Address J. I. Jones, Trustee in Bankruptcy, Box 1005, Great Falls, Mont.

FROM NOW ON, when I want to do business with the real men of the petroleum industry, I'm going to put my advertisement right here in this Classified Wants Section.

FARM LANDS FOR SALE

GOOD Kansas farm land for sale. Cash and terms or on crop payment plan. Some real bargains for cash. Emery R. Ray, Ingalls, Kans.

FOR SALE—Nucleus of largest irrigated cattle and horse ranch in Colorado. Oldest water right, wonderful summer and winter climate; best in the State; $300,000. Will take oil property in part and a mortgage for remainder. Fine transportation. 125 miles south of Denver. Address, Box 36, Florence, Colo.

TULSA REAL ESTATE

LOCATED in a highly restricted district, is a fine home consisting of five rooms, breakfast room and hall that can be purchased at a reasonable price, with good terms.

This home is very attractive and modern in every respect. It is one year old and in excellent condition. Street is paved. Sewer assessments fully paid. Driveway to garage; basement has been roughed in for a furnace. Trees and shrubbery are to be planted this spring, thus making it a real home. Address T. M. H., care The Oil and Gas Journal, Tulsa, Okla.

FINANCIAL

INTERNATIONAL financing; securities sold; no advance fees. Box 471, Oklahoma City, Okla.

COLLECTIONS—If I cannot collect your claims for you, you have no claims to collect; judgments, notes, mortgages, rents, taxes. Moutray, Bynum Bldg., Osage 2648. Tulsa, Okla.

CAPITAL supplied, manufacturing oil and other legitimate business, through sale of securities on reasonable commission. House established 30 years. Wiers & Co., 115 Broadway, New York City.

CAPITAL RAISING—Campaigns planned, written, printed—everything complete, ready to mail to investors. Twenty years' experience handling investment advertising. Clients all over America. Big, illustrated book, "How to Raise Capital," free if you submit detailed outline of your proposition. Ernest F. Gardner, L-511 Ridge Arcade, Kansas City, Mo.

CAPITAL SEEKERS—Put your project before 470 Canadian brokers and bank managers; cost trifling, under my plan. Details free. Amster Leonard, First National Bank Bldg., Chicago, Ill.

WANTED

BROKERS wanted to syndicate drilling proposition in Allen and Warren Counties. Shallow drilling. Leases adjoining production. Box 489. Bowling Green, Ky.

WANTED

WANTED—Broker desires good royalties to sell clients; no company royalties. Have price right. Gregg Snyder, 292 West 92nd Street, New York City.

WANTED 25 to 100 barrels production in Johnson and Magoffin Counties, Kentucky. Send full details in first letter. J. R. Kelley, Box K., Nickleville, Pa.

WANTED to trade acreage near test just starting on large structure in Somervell County, Texas, for new or good used 15-, 12-, 10-, and 8-inch casing. Foremost geologists reccommend this test as strong probability for wet gas and high grade oil. Lock Box A, Glen Rose, Texas.

POSITION WANTED

REFINERY MAN—Experienced pumper, gauger, loading rack. Write F. S. Karr, 115 East 28th St., South, Oklahoma City, Okla.

PETROLEUM and Industrial chemist with many years' experience, desires position. Address Box A-123, care the Oil and Gas Journal, Tulsa, Okla.

EXPERIENCED oil tester wishes to make connection with reliable oil company. Address Box A-171, care The Oil and Gas Journal, Tulsa, Okla.

POSITION WANTED by experienced refinery man; stillman, treater, chemist, connection foreman. Consider anything. Address Box A-190, care The Oil and Gas Journal, Tulsa, Okla.

EXPERIENCED lease man and driller understands all parts of the production of oil; also expert advice on buying production. Open for a position in anything. 715 Loretta Ave., Toronto, Ohio.

ACCOUNTANT with well drilling and general oil field experience is desirous of entering the employ of company with holdings in Mexico or South America. Address Box A-193, care The Oil and Gas Journal, Tulsa, Okla.

POSITION—By mechanical engineer with technical and practical experience in designing, constructing and operating of gasoline plants, refinery and maintenance engineering. Box A-175, care The Oil and Gas Journal, Tulsa, Okla.

EXECUTIVE—Man 32, married; energetic; capable. Accounting, corporate finance, oil production, marketing, sales promotion, advertising, plants and warehouses, sales or district manager. A thorough executive with excellent record. Box 1-C, care The Oil and Gas Journal, 30 Church St., New York City.

RESPONSIBLE Position Wanted—Technical graduate; considerable experience in geology, drilling, production and as field operator; would like to obtain immediate employment. Have unlimited executive ability and am able to handle any office or field work. If you want a proven hustler, please address Box A-160, care The Oil and Gas Journal, Tulsa, Okla.

BUSINESS OPPORTUNITY

OIL AND GAS located by natural mutual attraction. Good well sure. Address John Goesle, Pacific Hotel, Sherman, Cal.

SALESMAN and organizer will raise $10,000 to $50,000 for business or venture that promises a worth while future. Address P. O. Box 457, Chicago.

MEXICO—Illustrated, accurate informative news. Member Mexican Chamber of Commerce, U. S. A., $1.50 yearly; 12 numbers. 507 Deere Bldg., Dallas, Texas.

MY SCIENTIFIC METHOD eliminates guesswork. Producing areas carefully mapped before drilling. Production estimated. For particulars, write C. L. W., 5534 Hays St., Pittsburgh, Pa.

A MODERN, well furnished hotel, located at El Dorado, Ark.; heart of business district; traveling and oil men's headquarters. Other business necessitates sacrifice of well paying business. Priced to sell. Write Box 1207, El Dorado, Ark.

Additional Classified Wants on Following Page

National Petroleum Association Session Considers Situation

CAMBRIDGE SPRINGS, Pa., April 23.—Rate questions affecting railroad and pipe line transportation of oil and the price charged for Pennsylvania crude were among the matters taken up at the start of the semiannual meeting of the National Petroleum Association here today.

At a regional meeting of the Pennsylvania refiners, it was held that the price of Pennsylvania crude is too high and it was almost the unanimous decision of the refiners that there is no money in refining $4 Pennsylvania oil with the present quotations of other grades and the low prices of some of the refined products. However, this was decided to be a question which should be worked out by the individual refiners.

Considerable time was devoted to section 28 of the merchant marine act providing export freight rates apply only to goods shipped in American ships. Fayette B. Dow, Washington counsel, showed how this would affect inland refiners who, because of the lack of American tankers would have to pay the higher domestic rate. This, he said, would have bad results on Eastern refiners as the Western inland refiners would have to depend on the local market.

Mr. Dow told how he has been fighting this action and the association endorsed his activity in this respect. Fifty members are in attendance.

SINCLAIR GETS PERSIAN GRANT

A United Press dispatch from Teheran, Persia, April 22, says: "The Persian Parliament today adopted a bill approving the decision of the government to allow the Sinclair interests to develop oil concessions in northern Persia.

Ethylated Gasoline Being Discussed By Petroleum Chemists

By C. E. Kern

WASHINGTON, D. C., April 22.—The American Chemical Society is in session here during this week. The Cramton prohibition enforcement bill is strongly opposed by the society on the ground that its enactment would shackle the work of chemists by unnecessarily complicating the methods required to obtain industrial alcohol. In the making of ethylated gasoline the restrictions already existing have caused much friction.

Helium advocates among the chemists are urging that exports of this product be forbidden by Congress on the ground that America has a monopoly of this gas which will make the United States supreme in aviation.

During the convention 18 papers will be read before the petroleum chemistry section and nine papers before the section of gas and fuel chemistry. They relate chiefly the theories on anti-knock compounds, the chemical structure of the internal combustion engine, and various other topics largely of interest to the automobile industry.

J. S. COSDEN CONFIDENT

NEW YORK, April 19.—A sharp and highly favorable turn is at hand in the oil industry, is the belief of J. S. Cosden, expressed in reply to a request for his opinion on petroleum. In expressing his confidence in the outlook, Mr. Cosden pointed out: "For the first time in four years the industry has reached April 1 with a decrease in production and an increase in consumption. There is no new big field in sight that would upset the existing status. This will mean that, from an earning standpoint, the oil companies should do from 50 to 100 per cent better, at least."

Call for

"IWANA"

HAIR BELT

And Get the Best By Test

BETTER BELT SERVICE

LONGER BELT LIFE

FENWICK-REDDAWAY MFG. CO.

CAMEL'S HAIR, COTTON AND LINEN PRODUCTS

Office and Factory: NEWARK, N. J.

Tulsa Representative: A. F. Campbell, P. O. Box 171

CLASSIFIED WANTS

25 CENTS per line first insertion; 15c per line each additional insertion. Cash in advance.

MAIL your advertisement now. It will be published next week. Cash with order.

BUSINESS OPPORTUNITY

WILL GIVE part interest in full half Royalty and land in 80 to any oil man who will redeem foreclosure. Semiwildcat; Madison, Greenwood County, Kansas. Address Box A-180, care The Oil and Gas Journal, Tulsa, Okla.

STORAGE PLANT FOR SALE
Washington, D. C.

We offer for sale our bulk storage plant, including warehouse, garage, private siding, retail filling station, etc. The plant is located in the District of Columbia, on the main line of the B. & O. Railroad and is an ideal proposition for any refiner, jobber, or individual who wishes to operate a chain of filling stations and wholesale gasoline and oil in Washington, D. C. and vicinity. Full information on request.

DOME OIL CO., Inc.
Takoma Park, D. C.

WHITE SPACE at the top and bottom of an advertisement makes it conspicuous. Ask for it in your next advertisement. Figure the cost at regular rates per line.

I AM looking for "bold spirit," as Judge Beatty, of The Texas Co. says, who has the knowledge of oil prospects to appreciate a bed of coal more than 100 square miles in extent, and 4 to 8 feet thick, of the proper amount of fixed carbon which makes the greatest of "mother substances," and which is correlated with Red Sandstone" (Red Beds). Both salt water and sulphur indications. No farther from production than Texas was a few years ago. If you have the knowledge, the courage, the ambition, and some money for development, write for particulars, otherwise, don't write. R. A. Wheeler, Hight Point, N. C.

MAPLE SYRUP FOR SALE

MAPLE SYRUP direct from producer. Guaranteed 100 per cent pure and full weight, $4.50 per gallon, delivered. Special price on orders of 20 gallons or more. Orders received now for April shipment. A. L. Merry, Pine Slope Farm, Route 3, Belmont, New York.

FOR SALE—MAPS

FREE ARKANSAS MAPS showing oil development. We have a limited number of Arkansas State maps in colors, showing the trend of the oil development. If you want one of these free, send 10 cents for postage. Bray-Hawthorne Co., Inc. Arnold & Doyle Building, Camden, Ark.

FOR SALE—PETS

REGISTERED Bull Pups—Bulldog Park, 501 Rockwood, Dallas, Texas.

YOUR OLD FRIENDS

WANTED—The present address of W. A. Miles, formerly of Dallas, Texas. Important. Write A. B. Ryan, 1702 Farmers and Mechanics Bldg., Fort Worth, Texas.

WANTED—The present address of George Doty, formerly of Burkburnett, Texas. Important. Write A. B. Ryan, 1702 Farmers and Mechanics Buildings, Fort Worth, Texas.

MAILING LISTS

213 NAMES of purchasing agents of oil companies in Mid-Continent; guaranteed, 5c per name. Oil Industry Register. P. O. Box 1742, Tulsa, Okla.

968 NAMES of production superintendents in Mid-Continent; guaranteed; 5 cents per name. Oil Industry Register, P. O. Box 1742, Tulsa, Okla.

490 NAMES lease buyers in Oklahoma; guaranteed; 5 cents per name. Oil Industry Register, P. O. Box 1742, Tulsa, Okla.

STANDARD FORMS

CONSUMERS' LEDGERS

We are prepared to furnish from stock standard forms of Gas Meter Consumers Ledgers. Sample forms and quotations on request. First class material and workmanship.

DERRICK PUBLISHING CO.
Oil City, Penn.

STANDARD FORMS

OIL FIELD LEGAL BLANKS—Leases, assignments, releases, township plats, gauge books, run tickets, time books, well records, etc. Request on your letterhead gets free catalogue. Olds Press, 215 East Third St., Tulsa, Okla.

TOO LATE TO CLASSIFY

SHALLOW PRODUCTION—25 acres, 10 wells, 150 bbls.; equipped; 38 gravity; 420 feet deep; $100,000. Magill Co., Moran, Texas.

FOR SALE—First class production and royalty in Allen County, Kentucky, in the world's greatest shallow oil field. I am unable to look after it personally. A wonderful opportunity. Address F. A. Hughes. Monmouth, Ill.

5,000-BBL. TANK FOR SALE
Located Rosedale, Kans.
Attractive Price
ANDERSON-PRICHARD OIL CORP.
711 Colcord Bldg.
Oklahoma City, Okla.

WANTED—Drilling blocks on approved structure; shallow of semi-shallow territory preferred; submit complete information. Box A-199, care The Oil and Gas Journal, Tulsa, Okla.

POSITION WANTED—Firt class troffic man with over 10 years' railroad and oil company experience, handling rates and claims in southwest territory. Address, 5843 Richmond Ave., Dallas Texas.

COMMISSION SUSPENDS SECTION 28 A MONTH

Mid-Continent refiners have been greatly encouraged over the prospects for future export business with the announcement that on April 19, the Interstate Commerce Commission suspended the effective date of its order in respect to Section 28 of the Merchant Marine Act, postponing it from May 20 to June 20. The commission said the additional period should be utilized by the carriers to adjust their schedules.

This action is construed to mean that the commission has washed its hands of the matter, remitting the protesting shippers to Congress and the Shipping Board. The carriers hope to persuade the Board to modify or withdraw its certification of adequate bottoms and in the meantime are continuing their fight for new provisions in both legislative bodies.

Information of recent date indicates the Board may agree to a postponement of the provisions of Section 28. The joint committee of the Interstate Commerce Commission and the Shipping Board will meet Thursday, April 24 to discuss this matter.

CALIFORNIA GAS REVENUES

LOS ANGELES, Cal., April 19.—The Midwest Gas Co., operating in Los Angeles and Kern Counties, has reported to the railroad commission for the year 1923 that its operating revenue was $3,357,413.75 and operating expenses $2,232,342.59, giving a net operating revenue of $1,125,071.17. The net corporate income for the year was $1,006,237.54. The company declared dividends of $180,294.70 during the year, leaving an accumulated surplus of $2,225,475.35.

LEGAL

SALE, OIL AND GAS LEASE BY UNITED STATES GOVERNMENT

On May 21, 1924, at Chilocco Indian School, Chilocco, Oklahoma, 2,520 acres, more or less, of land in Township 29 North, Range 2 East, comprising a portion of the Chilocco Indian School Reserve, will be offered for lease to the highest bidder at public auction. Write to United States Indian Superintendent, Chilocco, Oklahoma, for full information.

M'Corkle P. L. Co. Lets Contracts For Pumps and Engines

The McCorkle Pipe Line Co. has let contracts for 40 engines of 400 horsepower each and 40 pumps each of 20,000 bbl. capacity. The Busch-Seltzer Bros. Diesel Engine Co. of St. Louis was awarded the contract for 20 engines, and the Worthington Pump & Machinery Co. of New York and the McIntosh & Seymour Corp. of Auburn, N. Y., for 10 engines each. The Worthington company got the contract for 10 pumps and the Prescott Co. of Menominee, Mich., for 30 engines. The contracts involve an expenditure of nearly $2,000,000.

It has not been announced that any manufacturers of pipe have been awarded contracts for the 8-inch and 10-inch pipe which the McCorkle company says will make up its line, which the program states will run from Waurika, Okla., to Aransas Pass, Tex., on the Gulf coast.

The McCorkle Pipe Line Co. is a mysterious institution. The promoters say they have ample capital back of them, but the public has not been told who the backers are. Because the Roxana Petroleum Corp.'s pipe line has a terminus at Waurika, where the other is scheduled to commence, it was believed that the Royal Dutch-Shell interests were back of McCorkle, but this is emphatically denied by the Roxana Petroleum Corp. Every attempt to locate the source of the capital came to a dead end.

The contracts let this week call for payment on an irrevocable letter of credit on the delivery of the goods.

The plans announced by the promoters are to start the line at Aransas Pass, working northwest to Karns County, where a branch line into Webb County will join the main line, and on to Bexar County, where it will make a connection with a branch line into the Caldwell and Guadalupe County fields. Eventually the line as projected would traverse or run close to all the important fields in North Central Texas. The plans are for 370 miles of 8-inch and 125 miles of 10-inch main line with 6-inch pipe in the two branch lines. There will be pump stations if the plans are carried out.

CALIFORNIA REFINED MARKET CONDITIONS

LOS ANGELES, Cal., April 19.—The consumption of the lighter petroleum products on the Pacific Coast is still somewhat disappointing. Weather conditions are better than last week. Ordinarily balmy days immediately increase the gasoline consumption. In California the hoof and mouth disease, with its resultant restrictions on travel, has practically eliminated all pleasure automobiling and consequently the local demand for gasoline and motor lubricants is seriously affected. With the exception of natural gasoline, in which a drop of about ¾-cent a gallon has taken place during the week, there is no particular weakening in prices. Much of the natural gasoline is manufactured by small concerns financially unable to store large quantities. Indeed most are not equipped with the necessary gas-tight tankage. Therefore this commodity would weaken where other products do not.

The lubricating oil market is showing real strength in the face of the curtailed demand for motor oils. There has been no overproduction of lubricants and no excessive stocks have piled up. In the second place, there are really only four companies on the Pacific Coast who manufacture lubricating oils in sufficient quantity to affect the market. They are all strong concerns with export outlets.

Fuel oil is strong, the market having been cleaned of all fuel available at less than the base price of $1.40 per barrel. Some is, of course, still being turned at a lower figure on old contracts, but $1.40 is the ruling price on all new business.

GROUP 3 GASOLINE MARKET UNSETTLED

(Continued from Page 22)

that the movement will improve. Export buying would be of great aid at this time and developments are being watched closely. The naphtha market is dull.

Kerosene and Distillates

Strength in the kerosene market is not so apparent this week as last. Prices are firm, however, with many inquiries being received. The demand for the 42-43 water white grade is exceptionally strong with many refiners unable to supply the many requests for immediate shipment. A considerable amount is moving direct to the trade at 4¾ and 5 cents with buyers for resale having difficulty in covering their requirements under the 4¾-cent price. There is no change in the distillate situation. Inquiry among representative refiners show that the output continues to be reduced.

Fuel and Gas Oils

An improvement in the demand for fuel oil is reported by a few refiners. The fact that prices are 5 cents under last week indicates that the improvement is not general. The week to week movement to regular customers including not only the marginal contracts but the spot sales, is satisfactory. That part of the fuel oil output sold to distant points is coming in competition with lower prices from other refining areas and the movement is slow.

Gas oil continues fairly active as to demand but prices have been lowered ⅛-cent. This is probably a reflection of the weak fuel oil market.

Natural Gasolines and Blends

The absorption grade of natural gasolines are ¼-cent lower as are the blends. As in the case of the straight run gasolines, stocks of natural gasolines are heavy. It is known that buyers have been offered considerable quantities for both spot delivery and delivery over May. Few actual sales are reported. Grade C prices are firm although the situation in regard to demand is practically the same as the absorption grades. Price concessions are being offered for casinghead products which do not fulfill Grade C specifications. Other than the price reduction previously mentioned there is no change in the blend market.

Wax

Wax is the strongest product of the Group 3 market. There are buyers offering as high as 5½ cents for immediate shipment. Practically all of the limited output is sold up over the month with very little available for May.

NATURAL GASOLINE MANUFACTURERS MEET

(Continued from Page 23)

which has made the American oil industry the greatest in the world," Mr. Buchanan asserted. "When they know the facts they will never be content to place this industry, most essential to our national prosperity and safety, in the lap of our political machine.

"We cannot say that because we have no direct contact with the buying public we are not interested in what that public thinks of the industry as a whole. On the contrary we are vitally interested, for only as the whole petroleum structure stands can we hope to stand, and as it is attacked and torn down, in the same proportion will the natural gasoline industry be destroyed.

"Other oil trade associations are rallying to the defense and we have been asked to join in a movement which has for its goal the ultimate education of the public concerning the economic value of petroleum and acquainting the people with all the true facts regarding the hazards, the profits and the losses attending the operation of the different branches of the business.

"This association must not only tell the story of natural gasoline, and the natural gasoline manufacturers, but it must help tell the whole story of petroleum."

Larkin Improved Sand Pump

(PATENTED)

This illustration is the famous Larkin Sand Pump which is found in every oil field throughout the world.

Besides a full line of Drilling and Fishing Tools and Packers of all kinds and sizes, we manufacture the LARKIN Patent Never Slip Pipe Grip, which does away with the old-fashioned way of putting in casing with rope and tongs, and is less expensive, more durable and more easily handled.

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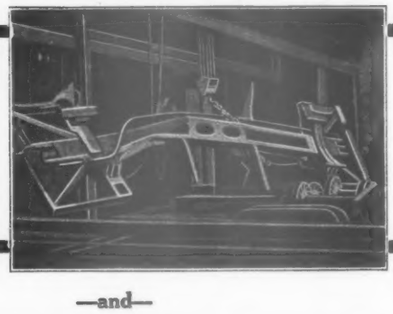

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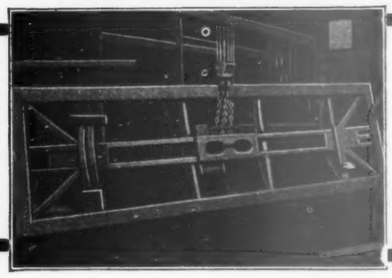

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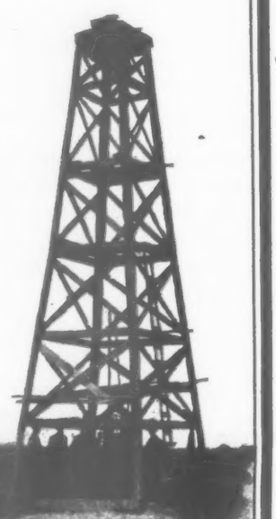
The illustration shows a Longyear crew drilling in Archer County, Texas, for the Sun Oil Company.



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Minneapolis, Minnesota, U.S.A.

KANSAS FIELDS

(Continued from Page 54)

and rigs on the ground for Nos. 2 and 3 Henderson, Holden & Miller had a rig on the ground for No. 6 Holman, NE cor. NW SW, Section 14-24-9, and farther south, Ross & Wann had a rig up for No. 1 Dimick, NW cor. Section 26-26-9.

Greenwood County

New production was being found in Greenwood County. The White Eagle Oil & Refining Co.'s No. 4 Edwards, C NE SW NE, Section 13-23-10, made 25 bbls. after a shot of 140 quarts in sand at 2,040-77 feet. The Mid-Kansas Oil & Gas Co.'s No. 4 Scott, SW cor. Section 23-23-10, was finished for 75 bbls. after a 180-quart shot in sand at 2,263-2,316 feet. The Empire Gas & Fuel Co.'s No. 2 Thrall, C SW SE SW, Section 29-23-10, was a 90-bbl. completion after shooting sand from 2,315-62 feet with 100 quarts. The Mission Oil Co.'s No. 1 Thrall, CNL NW SW, Section 32-23-10, swabbed 840 bbls. in 20 hours after getting top of sand at 2,235 feet, oil from 2,248-98 feet and slate at 2,304 feet, and shooting with 120 quarts. The same company's No. 26 Thrall, CNL NW NE, same section, was completed as a 100-bbl. well after a shot of 190 quarts at 2,263-2,344 feet, and No. 36 Thrall, CNL NE, same section, made 150 bbls. after a 190-quart shot.

Russell County

Russell County was showing the effects of the discovery of a commercial producing oil well. Derby, Streeter and Starns were spudding in No. 1 Oswald, SE cor. SW SW, Section 8-12-15w. The Producers & Refiners Corp. was rigging up and ready to spud in No. 1, NW cor. SE, Section 24-12-15w. Patton and others lost the hole in No. 1 Wallbridge, CWL SW SW NE, Section 4-13-15w, after drilling 360 feet. They will skid the rig 30 feet north and try again. The Lewis Oil Co. was moving in rig material for its No. 1 well, SE cor. NW, Section 31-12-14w. Fentress, Sutter and others were drilling at 945 feet in No. 1 Milke, SW cor. SE SW, Section 20-12-15w. The Valerius Oil & Gas Co. was running 15-inch casing to 412 feet in No. 1 Munsell, SW cor. NE, Section 17-12-15w.

Greenwood County

The activity in new operations which has been forecast for some months and which has been increasingly evident for the past few weeks, was especially noticeable in Greenwood County, where the arrival of favorable weather was greeted with the sound of the adz on new rig timbers all over the county. Rigs were in place for the Transcontinental Oil Co.'s No. 10 Olson, CEL NE SE, Section 11-24-9; Reveley and others' No. 5 Lewis, NE cor. SE NE. Section 11-24-9; Rodgers and associates' No. 2 Olson, CWL NW SW, Section 12-21-9; and timbers were on the ground for the Gypsy Oil Co.'s No. 2 Cannon, SW cor. NW SW NE, same section. A rig was finished for Polhaums and others' No. 1 Hendrickson, SE cor. Section 22-24-9, and one was being built for Glanson and others' No. 4 Moore, C SE SE, Section 24-24-9. Other rigs that were in place included Polhaums and others' No. 1 School Lot, NE cor. Section 27-24-9, and Haver and others' No. 1 Haver, SE cor. NW, Section 29-24-9. Timbers were ready for Bason and others' No. 1 Darsett, NW cor. SW SE, Section 31-24-9, and the Gypsy Oil Co. had a rig up for its No. 5 Nixon. NW cor. NE, Section 34-24-9. Polhamus and others had another rig in place for their No. 11 Marshall, NE cor. NW NE SW, same section.

Timbers were on the ground for Rhodes and others' No. 6 Browning, SW cor. Section 17-22-10, and a rig was up for the same interests' No. 2 Browning, SE cor. Section 18-22-10. Rhodes & Schoffer staked a location for their No. 1 Barnard, NW cor. NE SE, Section 32-22-10.

The Mid-Kansas Oil & Gas Co.'s No. 19 Allen, NW cor. SW NE SE, Section 23-23-10, was a rig, and the same company had timbers on the ground for its No. 5 Mason, C SE SW SW, same section. The Mission Oil Co.'s No. 41 Thrall, CSL N half S half SW, Section 28-23-10, was a rig; No. 42 Thrall. C SW, same section, had timbers on the ground; No. 38, CSL SE, Section 29-23-10, was a rig; rigs were ready for No. 2 Thrall, CNL NE NW SW, Section 32-23-10, and for No. 3 Thrall, NW cor. SW, same section; No. 39 Thrall, SW cor. NE, same section, was a rig; No. 40 Thrall, SW cor. NE SW NE, same section, was a location. Roth and the Great Southern Oil Co. had timbers on the ground for their No. 1 Thrall, NW cor. SE. same section.

The Empire Gas & Fuel Co. was building a rig for No. 2 Franz, NE cor. NW, Section 14-22-11, and the Phillips Petroleum Co. staked a location for No. 1 Saule, SE cor. Section 21-22-11. The same company and Reynolds had a rig finished for No. 1 Ott, C SW NE NE, Section 4-25-11.

The Theta Oil Co.'s No. 19 Schneider, NW cor. SE NW SW, Section 10-22-13, was a rig. The St. Louis Oil Co. had a machine in place for its No. 6 Everett, NE cor. SE NE NE, Section 15-23-13, and the Arkansas Fuel Co. staked a location for its No. 12 Boys, CNL NE NW, Section 29-23-13.

The Skelly Oil Co. was underreaming the 6-inch pipe to 2,333 feet in its No. 1 Teeter. SW cor. NW SW, Section 15-23-9. It had about 1,000,000 feet of gas from sand at 2,285-95 feet, and more gas at 2,300-04 feet. Wahn & Ross were spudding their No. 1 Dimick, NW cor. Section 26-26-9. The Magnolia Petroleum Co. was drilling deeper in its old gas well, No. 1 Witty, NE cor. NW SE, Section 29-26-9, at 2,550 feet. It had a show of oil at 2,445-75 feet. Jamison and others were drilling at 3,565 feet in their No. 2 Dixon, CEL SE SW, Section 18-28-9.

A well estimated good for 200 bbls. was found in R. G. Gillespie's No. 1 Browning, NE cor. Section 19-22-10 in sand at 2,327-49 feet. The Mid-Kansas Oil & Gas Co.'s No. 2 Prather, CWL NW SW SE, Section 30-22-10, was shot with 60 quarts in sand at 2,548-79 feet, with pay starting at 2,558 feet, and was estimated as a 60-bbl. producer. The Orlando Petroleum Co.'s No. 1 Breitkrantz, SW cor. NE SW, Section 4-24-10, was fishing for tools at 4,800 feet. The Empire Gas & Fuel Co.'s No. 3 Pees, SE cor. NE SE NE, Section 15-22-11, made 120 bbls. in 12 hours after a 120-quart shot in sand at 1,852-56 feet.

Sharpless and others abandoned their No. 1 Lahman, SW cor. SE SE, Section 15-24-8, as dry at 2,873 feet. Pipe and tools were left in the hole. Another duster abandoned was Frank Swift's No. 1 Cristy, SE cor. NE NW, Section 3-24-9, which found dry sand at 2,187-88 feet and a small show at 2,230-36 feet. It topped the lime at 2,335 feet and was plugged at 2,390. Reveley and others' No. 2 Lewis, SE cor. NE, Section 11-24-9, was a 200-bbl. well after a shot of 160 quarts in sand at 2,258-2,332 feet. The Transcontinental Oil Co.'s No. 5 Olson, CWL SW NE, same section, was good for the same amount of oil after a 160-quart shot in sand at 2,140-85 feet. The same company treated its No. 8 Olson, NE cor. SE, same section, to a shot of 180 quarts in sand at 2,245-2,317 feet and it made 200 bbls. afterward.

JAPAN TESTING OIL SHALE

LOS ANGELES, Cal., April 19.—Recent shipment of shale retort to Tokyo has revealed the effort by Japanese capitalists to develop Manchurian shale deposits in order to provide the Japanese Navy with a permanent supply of fuel oil. According to the inventor of the process by which petroleum is extracted from shales by dry distillation, the company operating at Ashland, Ore., is extracting 86 gallons of crude oil from a ton of shale and recovering 8,000 feet of gas yielding 2 gallons of gasoline per 1,000 feet. The report was shipped to the Orient by the American-Japanese Commercial Co.

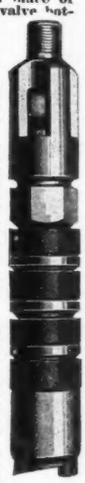
Simple—Yet an Unusual and Thoroly Tested Money Saver

Like many other things, the new, absolutely guaranteed Norris Clutch-Type Standing Valve Puller is so simple and so moderate in price that the practical money and time-saving convenience that it represents is often not fully appreciated. Yet it is such a good investment that we are willing to let you try it out for yourself at our risk.

To see how simply but efficiently the Norris does its work, note the brief operating instructions that follow:

First, the small end of the pin shown at the left ("A") is dropped thru the clutch end of the socket shown immediately below it ("B"). Then pin and socket are screwed firmly into the Standing Valve crown. That represents the lower portion of the clutch device.

Now, the clutch socket shown below at the right ("C") is screwed firmly on to the lower end of the working valve body in place of the ordinary valve bottom. That completes the upper part of the clutch.



When pulling rods, if it is wished to pull standing valve too, simply lower the rods until valves are together, give them a few turns, and the standing valve will come up every time. A run of the rods in and out of the hole is saved, with all the expense and loss of production that this represents.

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Try the Norris in your own work. If it doesn't do all we say it will do, return it and your money will be refunded. No questioning or quibbling—Norris Brothers, with a 17-year record of square dealing, guarantees this article. At your supply house or direct.

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STANDING VALVE PULLER

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Oil Operations at Panama; Drilling by American Companies

Writing of the oil possibilities of Panama, John F. Sheridan, consulting engineer describes present operations and prospects in an article in Engineering and Mining Journal Press.

The Sinclair Oil Co. has two holes down on Columbus Island in Almirante Bay, in the northeastern province of Bocas del Toro; both wells are cemented and capped in. The head geologist, Dr. A. C. Veatch, stated that Panama had a broad sedimentary belt extending through Chiriqui and Veraguas to the Panama Canal Zone line on the west and from the eastern line through the Province of Panama, and the Darien region into Colombia with structures in the Tertiary and Cretaceous formations. Personal examinations have shown marine fossils, marls, limestone and oil-bearing shales in abundance in both Provinces of Chiriqui and Panama generally, and the Darien region in particular. The presence of marine fossils inland in the Darien indicates that portions of the district were once covered by the Pacific Ocean.

Dr. Veatch stated that in April, 1923, a contract was ratified with the Sinclair company by Dr. Belisario Porras, the President of Panama, granting the company approximately 700,000 acres of prospective oil land in the Darien region, and that he had Mr. Terry in charge of the Sinclair field force, reporting on and examining this area. With the acreage already acquired, the Sinclair holdings in Panama will approximately total 1,225,000 acres. Doctor Veatch stated that Panama structures were very promising for oil production, especially in the Darien region; that any production brought in was close to a ready market at the canal; that the Panama Government was stable and liberal in its dealing with oil-producing companies, and that, in fact, Panama had the most liberal oil laws of any country in Latin America.

Sinclair Holdings

According to Dr. Veatch, the Sinclair company had acquired 326,000 acres more in the district of Pinogana, Darien region, Province of Panama. Its new holdings are in one block, embracing a very large area of the Tuyra and Chuquinari River basins and tributaries of these rivers; the other three areas owned by this company are located as follows: No. 1 in Bocas del Toro, in which the company has two holes down and capped, on the dome of Columbus Island in Almirante Bay. Area No. 2 runs to the northern and eastern boundary of the Panama Canal line and embraces the rivers Pina, Punta Grande, Legarto, Salud and Tecucal, and located between 9 degrees, 8 minutes North latitude, to 9 degrees, 20 minutes North latitude and 80 degrees west longitude to 80 degrees 20 minutes west longitude. Area No. 2 extends along the Pacific Ocean in the Province of Chiriqui from 82 degrees 20 minutes west longitude to 82 degrees 45 minutes west longitude, and from the Pacific Ocean running north at Bartolomo to Cuervo; thence northwest to Pueblo-viejo; thence directly west to the Chiriqui River, and directly south to the Pacific, bordering on the Chorcha Petroleum Co.'s 21 mining titles covering 53,000 acres, which The Texas Co. controls through 51 per cent ownership in the Carib Syndicate of Maine.

Texas Co. Drilling

The Texas Co. loaned its attorney, Sr. Pedro Luna y Parra, to the Carib Syndicate to sign up the contract and oil lease on the Chorcha property last year.

Mr. Sheridan is the agent for the Chorcha Petroleum Co. and claims to have been the first to dig for and bring seepage oil out of the Chorcha Oil Co.'s holdings in Chiriqui and also from the Darien region of Panama. The Chiriqui oil is a high gravity oil, asphalt base, and though the Carachina oil is similar to the Panuco Mexican product, the oil found

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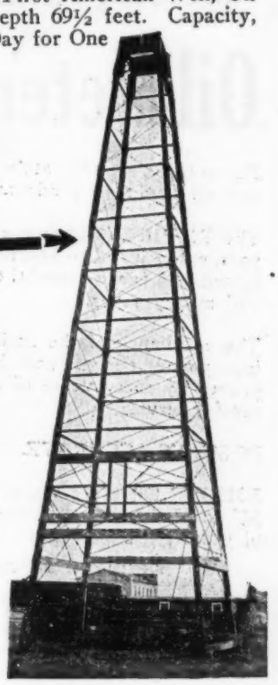

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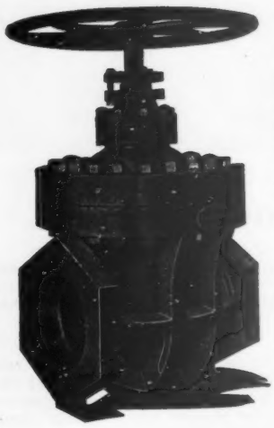

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2

in Pinogana is similar to the California oil and runs about 38 degrees Baume.

The Carib Syndicate of Maine, in which The Texas Co. holds 51 per cent of the total stock issued, controls considerable acreage in Panama in the Provinces of Chiriqui, Veraguas, and Panama. The Texas Co. at the present time is drilling on the Sinclair holdings in Chiriqui on a well defined structure about 6 miles from a small town called Boqueron; and is obligated by leasing contract to drill on the Chorcha Petroleum Co.'s 21 mining claims, containing 53,000 acres, located east of David and between the Chorcha Mountains and the Pacific coast.

The Texas Co. made a very peculiar mistake in locating and drilling a well between the Chiriqui and the David rivers about 3 miles east of "Las Trancas." It set up the rig and started making hole, only to find that it was drilling on the concession granted to the Sinclair company. A drilling arrangement was thereupon entered into by The Texas Co. and the Sinclair interests.

Gulf Co. Operations

The Gulf Oil Co., through the Panama Gulf Co., has been drilling for some time on a well-defined structure, located about 6 miles from the town of Garachine in the district of Chepigana in the Darien region, along a line of well-developed oil seepages. It is down in a hard lime formation and is about to set and cement in an 8-inch casing. This well was drilled with rotary tools. The bore is located between two rivers on a line of oil seeps and on favorable structure; there is no doubt about the petroliferous possibilities of the Darien region, and there are all of the well known surface indications, such as asphalt deposits, oil seeps, mud volcanoes, and oil scum on the river higher up, with one spring showing oil on surface in fair quantity in the Pinogana district. The property on which the well that has been drilled is located is known as the Darien estate, and is owned by Dr. Sylvanus M. Pearman, of Rochester N. Y. The tract is 19 miles by 30 miles; in 1911 over 50,000 acres was denounced and taken up by 21 men, mostly Americans. The owner, Dr. Pearman, claimed the subsoil rights under the old Roman law and won a decision in the Supreme Court against the 21 American holders of the mining rights on this tract.

The Standard Oil Co. of California has opened offices on the Avenida Central in Panama City, with a large field force in charge of Mr. Montgomery, manager, and Dr. George Nomland, geologist. In an interview, the manager of the company stated that he was leaving for a trip to Ecuador to look over the oil possibilities in Sant Elena and Punta Sentinela (Sentinel Point.) Here a number of bores are completed and others are drilling shallow wells. A great number of oil pits are producing oil in quantity.

The Royal Dutch has oil holdings in Panama, and also the British Controlled Oilfields, Ltd., but up to the date of writing neither has done any drilling.

Of the Indian tribes encountered by the oil prospector and explorer, the Kama Indians are the most warlike and, to date, will not allow any white man or native above the Membrillo River on the upper reaches of the Chuquinaki.

CIMARRON SWALLOWS ACREAGE

GUTHRIE, Okla., April 21.—Oil lease men who have been scouting along the Cimarron River in Logan County, Oklahoma, have found that a tract of State school land they wanted, shown by the plat to contain 157 acres, actually contains but 40 acres. Changes in the course of the river have swept the remainder into the bed of the stream. The State is said to have suffered a loss, but not so large, in Cleveland County, by reason of a change in the course of the South Canadian River.

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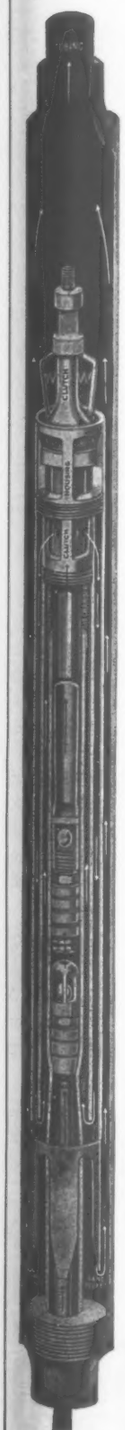

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OPERATIONS REPORTED IN OKLAHOMA FIELDS

(Continued from Page 42)

tion 25-15-7, from sand at 3,322-24½ feet. Rock pressure was 1,240 pounds. J. E. Crosbie and others were drilling at 525 feet in their No. 1 Richard, CEL SE NW SW, same section.

Three New Producers

Three new producers were added to the list in Section 17 15-8. The Eastern Oil Co.'s No. 2 Roberts, SW cor. SE NE, was making 5 bbls. an hour from sand at 3,690-3,725 feet. The Prairie Oil & Gas Co.'s No. 2 Mitchell, NE cor. NW SE, produced 80 bbls. natural from sand at 3,225-45 feet, and at last report was down to 55 bbls. Gas sand was found on top of the oil at 3,218-25 feet. The Pure Oil Co.'s No. 8 Yarbola, NE cor SW NE, was good for 551 bbls. after a 100-quart shot in sand at 3,752-91 feet. Gravity of the oil tested 42.7 degrees.

The Texas Co. was spudding its No. 1 Yarbola, SE cor. SW SW, Section 23-15-8, at 275 feet. The Mid-Kansas Oil & Gas Co. was drilling at 650 feet in its No. 1 Pelah, NW cor. NE SW, Section 29 15 8.

A 25-bbl. producer resulted from a shot of 90 quarts in C. G. Tibben's No. 1, NE cor. SE NE, Section 13-14-8. Sand was at 2,310-57 feet. His No. 7 Johnson, CSL SE SE, Section 26-14-8, was good for 110 bbls. after a shot of 50 quarts in sand at 2,453-94 feet. A rig was completed for his No. 8 Johnson, SE cor. SW SE, same section. Other new work in this area included the Prairie Oil & Gas Co.'s No. 5 Kernal, NE cor. SE, Section 30-14 8, which was spudding; the Phillips Petroleum Co.'s No. 2 Beaver, drilling at 810 feet; the Independent Oil & Gas Co.'s No. 10 Beaver, NE cor. NW NE, same section, drilling at 440 feet; and the same company's No. 11 Beaver, NW cor. NE, which had a rig in place.

C. G. Tibbens was also spudding his No. 1 Sneed, NW cor. Section 18-14-9, and C. W. West and others were likewise spudding their No. 1 Mayes, NE cor. SE, Section 22-14-9.

Vern and Bruner Areas

The Vern and Bruner areas of western Tulsa County were exceedingly active, with numerous tests drilling ahead to determine the extent of the productive acreage and to prove whether or not the two acres will eventually be joined into one pool. Among the recent completions, the Shaffer Oil & Refining Co.'s No. 1-A Partridge, SW cor. NW, Section 4-19-12, was good for 425 bbls. natural from sand at 2,031-51 feet; No. 2-A Partridge, CWL SW NW, same section, made 166 bbls. natural from sand at 2,003-45 feet. It was shot with 100 quarts and after cleaning out produced 185 bbls. The same company was rigging up tools for its No. 4 Partridge, CWL NW, same section.

Williams and others abandoned the rig for their No. 1 Townsite, SE cor. Section 5-19-12. Hughes and associates recorded a failure in their No. 1 Partridge, NW cor. SE SE, Section 5-19-12, plugging it at 2,110 feet, after passing through a dry sand at 1,985-90 feet. The Echo Oil Co.'s No. 2-A Grayson, CEL SE NE, same section, which originally produced 600 bbls. natural from sand at 2,053-76 feet, was at latest report making 200 bbls. The same company had a machine in place for its No. 3 Grayson, C NW SE NE, same section, and was building a rig for its No. 1 See, C SE SW NE, same section. The Echo's No. 1 Berryhill, NE cor. SE, same section, was shot with 10 quarts in sand at 2,057-68 feet and was good for 120 bbls. afterward.

Thompson & Black's No. 2 Bruner, NE cor. SE SE, Section 6-19-12, gauged 980 bbls. natural from sand at 1,998-2,026 feet. The same company was drilling at 1,859 feet in its No. 3 Bruner, SW cor. SE SE, same section; tools were being rigged up for No. 4 Bruner, C SE SE, same section; a rig was building for No. 5 Bruner, SE cor. same section. The Sand Springs Home was drilling at 1,610 feet in its No. 3 Bruner, NE cor. NW

(Continued on Page 138)

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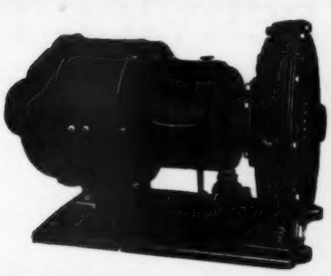

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Back Pressure Can Be Maintained on Wells in Oklahoma

Officials of the Marland Refining Co. believe that the concern's No. 2 Pettit, NE cor. SW SE, Section 20-23-8, Hominy district, southern Osage County, Oklahoma, is one of the most remarkable wells in the State, having produced a total of 419,500 barrels of high-grade oil, in 148 days, after being shut in entirely several days and flowing against heavy pressure for the remainder of the time.

The well got the sand on October 15, and after the tools were pulled, a stream of oil shot over the crown block. It was shut in until October 25, when it was opened 5 hours and made a total of 1,920 barrels, or an average of 384 barrels an hour. It was again shut in and opened on November 15, and made to flow through a 1-inch orifice. It was allowed to flow from 5 to 20 hours daily for the next 30 days and flowed steadily through the restriction from that time until April 10. During the 148 days it made an average of 2,835 barrels daily restricted flow. The best 24-hour flow was 3,250 barrels and the lowest was 2,820 barrels during this time.

On December 1, a pressure gauge and a thermometer were placed on the control head. A back pressure on the well was shown to be 145 pounds, with a temperature of 104 degrees F. For a few days the back pressure decreased to a point where it was 130 pounds with a temperature of 109 degrees. Back pressure and temperature then remained constant at 130 pounds and 108 degrees for 68 days after which the temperature was seen to make a slight increase but the pressure did not change appreciably.

The Marland Refining Co. points to this well as proof to other Oklahoma operators that back pressure can be maintained on Oklahoma wells and a large amount of oil recovered. At no time has the flow of gas in Pettit No. 2 exceeded 500,000 feet, company officials say.

EASTERN PIPE LINE RECEIPTS IN MARCH

Receipts of crude petroleum during the month of March from the wells by the pipe lines of the eastern division, which make regular monthly reports of their runs, were 2,130,354 barrels The average receipts aggregated 68,721 barrels. This is an increase of 157,678 barrels in the total and a gain of 698 barrels in the daily average when the figures are compared with those for the previous month, February. The daily average receipts were 7,871 barrels less than they were for March, 1923. All the pipe lines which are included in this report showed increases in their runs except the Riggs refinery.

The receipts of crude oil from the Illinois Field during the month of March amounted to 611,289 barrels. The daily average was 19,719 barrels. This is an increase of 75,798 barrels in the total and a gain of 1,288 barrels in the daily average when the March figures are compared with those for February. The total receipts in the Illinois Field are 13,718 barrels less than they were in March, 1923. The March receipts were divided as follows: Illinois Pipe Line Co., 581,825 barrels; Tide Water Pipe Co., 29,464 barrels.

Total deliveries by the two companies in the Illinois Field during March amounted to 369,543 barrels, which is an increase of 15,930 barrels over the February total. The daily average was 11,921 barrels, a decrease of 269 barrels. The total is 103,378 barrels less than the total for March, 1923. The March total was divided as follows: Illinois Pipe Line Co., 313,271 barrels, and Tide Water Pipe Co., 56,271 barrels.

Total deliveries of crude oil by the eastern pipe lines during March amounted to 4,560,037 barrels and the daily average was 147,098 barrels. This is an in-

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crease of 246,820 barrels in the total and a decrease of 1,634 barrels in the daily average when the March figures are compared with those for February. The daily average shipments for March were 38,389 barrels smaller than they were for March, 1923. All of the companies included in this report had greater deliveries in March than in February except the Eureka Pipe Line Co., the Lima division of the Buckeye Pipe Line Co., the Crescent Pipe Line Co. and the Tide Water Pipe Co.

The amount of crude oil held in storage by these pipe lines decreased 937,316 barrels during the month of March, amounting to 10,906,752 barrels at the close of the month. This brings the amount of crude oil held by these pipe lines to the lowest figure recorded for several years and compares with a high mark of 17,009,293 barrels recorded at the end of February, 1921. There was a decrease in the amount of crude oil at the close of March compared with the close of February held by all the pipe line included in this report except the Crescent Pipe Line Co. and the Emery Pipe Line Co.

There was an increase of 26,060 barrels recorded in the amount of Lima oil held by these pipe lines. There was an increase of 16,583 barrels in Illinois oil in storage. Decreases were recorded in the stocks of the other grades of crude as follows: Pennsylvania, 132,632 barrels; Kentucky, 151,582 barrels, and Mid-Continent, 695,745 barrels.

Closed Coal Mines In Southwest States May Boost Fuel Oil

OKLAHOMA CITY, Okla., April 19.—An increase in fuel oil prices in Oklahoma, Arkansas and Texas is likely to be a result of the closing of coal mines in southwestern States, oil jobbers say. The demand for fuel oil now is about equal to the output and the price is strong at $1 to $1.10. A long period of idleness in the coal fields, jobbers say, might bring fuel oil back to the higher prices which prevailed some time ago.

A decline in the price of coal a year ago caused a few industries that had been using fuel oil to return to coal. Among these were some of the leading flour mills of these States. Announcement of the closing of the mines already has brought to Oklahoma City oil jobbers many inquiries as to the supply and prices of fuel oil, and jobbers predict a general return to fuel oil. Stocks of coal are reported to be heavy and prices low.

Only about 25 per cent of the fuel oil manufactured in Oklahoma is shipped out of the State, jobbers say. Railroads are the principal users. The resumption of operation of over 100 ice plants in Oklahoma already is drawing upon limited stocks of fuel oil. The demand has been increased in Oklahoma, Texas, Kansas and Arkansas also by the drilling of oil wells.

"In my opinion we need not look for the retail price of gasoline to reach 30 cents in Oklahoma this summer," says L. H. Prichard, president of the Anderson-Prichard Oil Corp. "However, it will be necessary that prices be increased. The price of gasoline at the refinery now is 11 cents firm. It is safe to say that a majority of refiners are not making any money at that price and that some are losing money, for the reason that two advances in crude prices have not been followed by an advance in the refinery price of gasoline. Stocks purchased some weeks ago are still rather heavy but will be reduced rapidly on the arrival of spring."

An increased demand for kerosene in Oklahoma and Texas this summer is expected. Jobbers say the demand is greater in summer than in winter in this territory. Use of it on the farm, particularly by chicken-raisers, is rapidly increasing.

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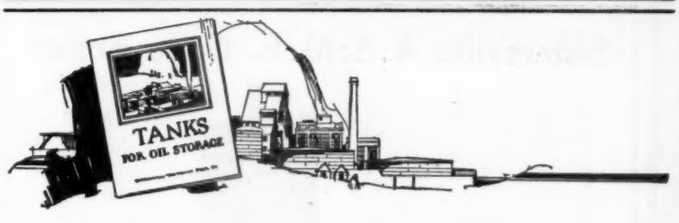

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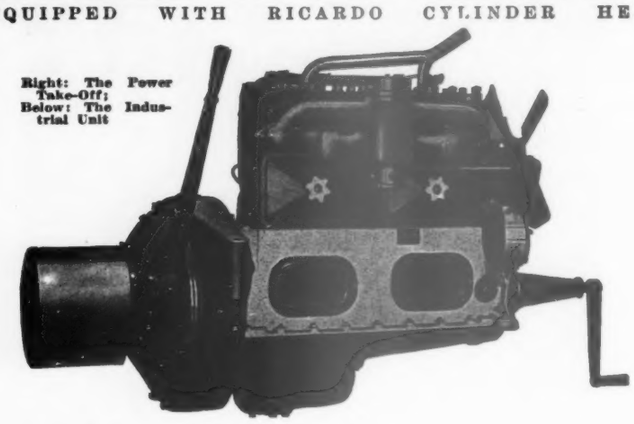

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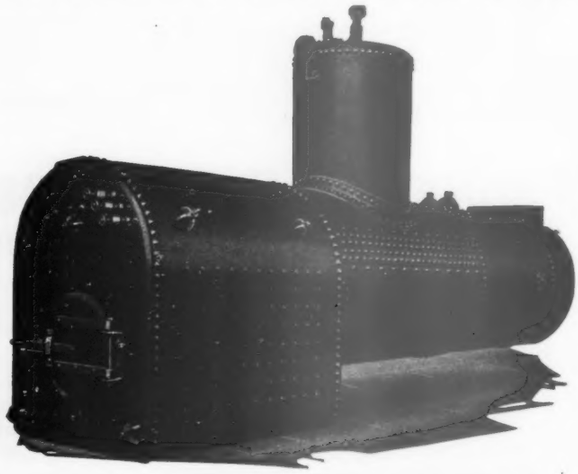

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SULPHUR DISTRIBUTION IN CRUDE PETROLEUM

(Continued from Page 92)

the gases produced and as loss in the distillation. In order to carry on the work on a scale sufficiently large to obtain products in large amounts, it was necessary to use an iron still, and it is possible that some of the sulphur in the crude was absorbed by the metal. It has been found, however, that the sulphur in Mexican distillates is very firmly combined and does not easily attack metals. Therefore, any sulphur combining with the metal of the still or condenser would probably come from the sulphur in the gases, and it appears most nearly correct, to assign to the gas all of the sulphur not otherwise accounted for. Thus, in the skimming distillation 2.5 per cent of the crude was given off as gas and, as this must have contained 5.5 per cent of the total sulphur in the crude, the total sulphur content of this gas must have been 8.30.

Mexican Petroleum

Investigations of the nature of the gases given off from Mexican crude indicate that the sulphur is entirely present as hydrogen sulphide. On this basis the gas in the skimming distillation would have contained 8.82 per cent hydrogen sulphide. The same method of calculation has been carried on throughout Table 1, and it is apparent that the sulphur in all distillations concentrates mainly in the gases and in the residuums. In the analytical distillation the gasoline distillate contained only 1 per cent of the total sulphur, the kerosene distillate 4.5 per cent, the gas oil and lubricating oil 10 per cent, the residuum 71 per cent; thus leaving 13.5 per cent of the total sulphur as a constituent of the gas. In the coking distillation this is even more evident, 17.5 per cent of coke carrying 29 per cent of the total sulphur in the crude. Another interesting relationship is that the distillates of similar boiling point, even though they are of somewhat different derivation, contain practically the same percentage of sulphur. The gas oil and lubricating oil fraction from the analytical distillation was obtained under conditions which to a large extent prevented cracking. The cracked gas oil and lubricating oil fraction in the rerun distillate was obtained under conditions which would have promoted cracking, and that cracking actually occurred is evident when the percentages obtained are compared. In the analytical distillation only 14 per cent of gas oil and lubricating oil was obtained, while in the rerunning distillation 29 per cent was recovered. The specific gravity of the two products, however, is practically the same and the sulphur content is very similar, namely, 2.68 per cent and 2.59 per cent.

These distillations show that considerable amounts of the sulphur in the crude oil will be obtained as hydrogen sulphide in the gas. In running a commercial distillation of this crude it would probably be found that hydrogen sulphide would be generated during the first part of the distillation also, as fresh Mexican crude contains a small amount of dissolved hydrogen sulphide. It will be noted, however, that the gas given off while the kerosene was being distilled contained no sulphur. As the figures on the gases were obtained by difference it is possible that a small amount of sulphur was actually present, but other distillations of this crude confirm the fact that little if any hydrogen sulphide is given off during this part of the distillation. It is only when the crude begins to crack actively that hydrogen sulphide is generated in large amounts. This is evident from the amount and character of the gas associated with the gas oil and lubricating oil fraction in the analytical distillation, and particularly in the gas which came off during the production of cracked distillate. Thus, this gas contained 19.11 per cent of hydrogen sulphide.

It is evident from Table 1 that the

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largest percentages of sulphur are to be found in the various residuums, and it was thought advisable therefore to separate the asphalt from the oil. Accordingly, a 2,500-gram sample of the fuel oil from the skimming distillation was extracted with acetone in the special type apparatus illustrated in Figure 2. This apparatus consists of a wide-mouth 1-liter bottle containing two ½-inch brass tubes as shown. The tubes were inserted through a cork stopper which had previously been extracted with acetone and benzol. A paste of litharge and glycerin was then used to fill the pores in the cork, and the bottle was evacuated while the paste was drying, thus drawing it into all the crevices in the stopper. The upper end of the brass tubes were then supported by wires passed around them and around the neck of the bottle, and a collar of terne-plate was slipped over the neck of the bottle and filled with plaster of Paris. This apparatus proved to be tight both against oil and the various solvents employed. The bottle was filled about two-thirds full of coarse sand and approximately 100 c.c. of oil was placed on top of the sand and allowed to soak thoroughly into it. This distribution of the oil on the sand was found to enable the various solvents to act very completely. The oil was extracted by passing acetone through the brass tube reaching to the bottom of the bottle, the acetone solution removed through the short brass tube at the top, and the acetone was then distilled from the extract. In actual practice a series of these extraction bottles was used in the form of a cascade, the overflowing solution from the first bottle passing into the second and so on, according to the counter-current principle, so that fresh acetone came into contact with the most nearly completely extracted materials and the solution became continually more saturated with oil as it passed through the cascade. After the oil was completely extracted by means of acetone a similar extraction was made with C. P. benzene. This removed practically all of the material insoluble in acetone and on the evaporation of the benzene solution, a very hard, brittle, jet-black asphalt was obtained.

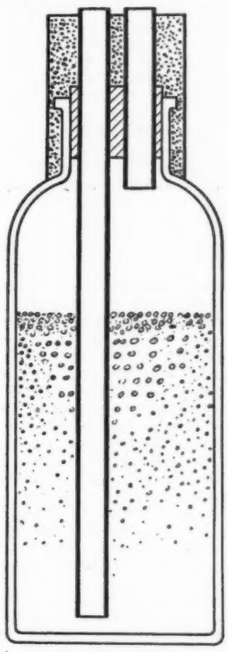


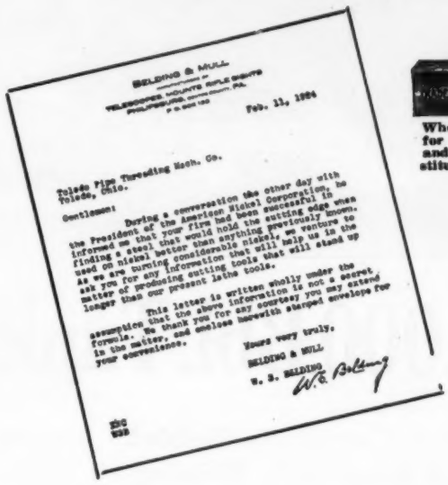
Figure 2—Extractor for asphaltic crude oil

Sulphur in Asphalt-Free Oil

The distribution of sulphur in products of the asphalt-free oil is given in Table 2, which is similar to Table 1 except that the fuel oil is taken as 100 per cent, whereas in Table 1 it was 85.5 per cent

(Continued on Page 142)

A Recommendation for Genuine "Toledo" Dies



Feb. 11, 1924

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Gentlemen:

During a conversation the other day with the President of the American Nickel Corporation, he informed me that your firm had been successful in finding a steel that would hold the cutting edge when used on nickel and nickel alloys, which was unknown. As we are buying considerable nickel, we venture to ask you for any information that will help us in the matter of producing cutting tools that will stand up longer than our present lathe tools.

This letter is written wholly under the assumption that the above information is not a secret formula. We thank you for any courtesy you may extend in the matter, and enclose herewith stamped envelope for your convenience.

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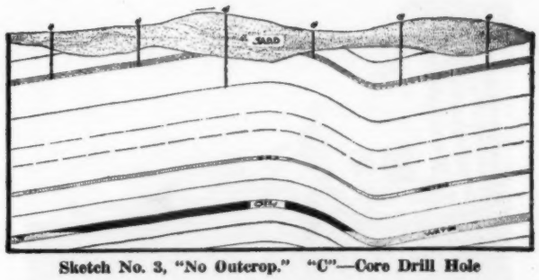
Oil, but no outcrop!



Sketch No. 3, "No Outcrop." "C"—Core Drill Hole

The answer to the question "Is There Oil?" when surface conditions are blind, is a

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A few relatively short holes through over-burden or non-conforming strata will pick up the key bed and enable the geologist to plot structure accurately so that wells may be drilled to the sand with assurance that the oil is there.

The core tells the whole story.

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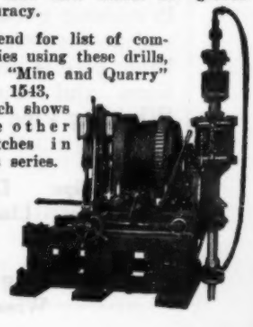
Send for list of companies using these drills, and "Mine and Quarry" No. 1543, which shows the other sketches in this series.



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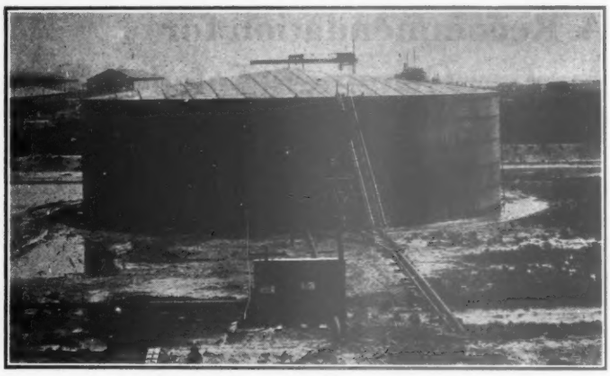

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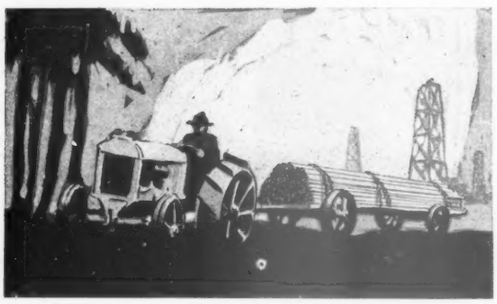

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REPORT SHOWS EFFECT OF CLOSE DRILLING

(Continued from Page 88)

obtained before drilling into the oil measures. The development of this zone has been in a more orderly manner than the development of the overlying zones, in nearly all of the wells the water strings having been uniformly in this overlying shale body. Immediately underlying this shale is a five-foot stratum of oil sand, which is a fairly well defined marker for the top of the Ashton zone, it being present in practically every part of the field, and contains oil over a greater area than the lower sands of the zone and is the principal producing sand in wells on the edge of the field.

The Ashton zone was developed in stages by the larger companies until a depth of 1,400 feet below the top of the zone was reached in the northern area of the field. In the central portion of the field wells were drilled as much as 2,200 feet below the top of the zone, but intermediate or edgewater was encountered in the lower portions of the wells. It may now be considered that the thickness of the commercially productive formations of the Ashton zone is not more than 1,300 feet.

The first 400 feet of the Ashton zone is composed mainly of sandy shale and sticky shale with small lenses of oil sand. Initial production of wells producing from these formations was about 1,000 barrels per day. Under this horizon is about 200 feet of sandy and sticky shale, with no true sands, yielding very little, if any, oil. The next 400 feet is what is locally termed "high pressure formation," being composed chiefly of oil sands and sandy shales carrying oil, and having a high gas pressure. Very hard shells, from 3 to 7 feet thick, are encountered within this 400 feet, generally just above the oil sands. Locally some of the shells are called "three day shells," as it usually takes three days to drill through them. It is from this 400-foot horizon that the greatest flush production of the field is obtained. Wells have been completed with a production in excess of 4,000 barrels daily, with as much as 7,000,000 feet of gas with a pressure of 1,200 pounds per square inch.

Immediately under this "high pressure" portion of the zone is found 200 feet of sandy shale and sticky shale, containing thin layers of oil sand. This portion of the zone does not add materially to the production of the field, as oil can not be produced from it profitably with oil from overlying formations. This is probably due to the lower pressure in these oil sands and to the lower gravity of the oil. On the higher portions of the monocline, in the central area of the field, as much as 600 feet of soft broken shales has been penetrated below the 200 feet of sandy shale and sticky shale above mentioned, making 800 feet of formations opened up below the "high pressure" portion of the zone. Core barrel samples showed streaks of heavy oil sand.

It required nearly two years for the production of the Ashton zone to reach its maximum, which was attained on April 4, 1923, with a total daily production of 118,996 barrels from 100 wells, an average of 1,190 barrels per well daily. On November 15, 1923, the production from the zone had declined to 68,530 barrels with 156 wells producing from it, an average of 439 barrels per well per day.

The development of the zone has been most extensive in the northwesterly area where wells have been uniformly spaced and allotted 2.5 acres each. Small portions of this area have produced to date 200,000 barrels of oil per acre from the Ashton zone and one well has produced to date over 900,000 barrels from it.

In the southeastern portion of the field the formations within the Ashton zone are very different from those in the northwestern portion, and correlations over any appreciable distance are uncertain and almost impossible, especially south of Seventeenth Street. The shale bodies

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show considerable thickening in the southeastern area, with a conspicuous absence of the prolific oil sands of the northwestern area. On the ideal section G-G, Plate V, there is an apparent unconformity at about Seventeenth Street, with an uplift to the south.

That the formations within the zone are more or less lenticular is indicated by the fact that sand and shale bodies recorded in the log of one well may be absent in the log of an adjoining well. However, this may be due to inaccuracy on the part of the driller in logging the formations. Frequently core barrel samples taken in a well show the formation at a definite point to be different from that logged on the company tour report. Petroleum Midway Co., Ltd., in its well No. "Towers" 2, checked this phase of the difficulty in correlating by securing core samples every 10 feet between depths of 3,450 feet and 4,250 feet. These cores showed that there was a tendency on the part of the driller to log many formations as sand that were in reality sandy shale. The lenticularity of the formations is also indicated by the fact that dry or barren sands are of frequent occurrence within the oil zone.

Correlation of formations on the basis of gravity of the oil produced has not been possible, due to its wide variation, the same sand producing heavier oil as the edge of the field is approached down the dip. Neither can the quantity of production be used as a help in correlating, due to the variation in saturation, texture, and porosity of the sands in the same zone.

Surf Zone

South of the main portion of the field in the Santa Ana River flats, a small amount of oil has been produced from formations which are not similar to those of the northern area of the field. The gravity of this oil is 23 degrees Baume. Standard Oil Co. pioneered development in this area, and at present is the only producer from this zone. In the early history of the field Standard Oil Co. obtained 20 barrels daily production of 12 gravity oil from a depth of 3,759 feet in its well No. "Surf" 1. By drilling deeper in well No. "Surf" 2 a stratum of shale 600 feet thick with distinctive reddish streaks was found below this heavy oil. Well No. "Surf" 2 obtained a consistent production of 400 barrels daily from a sand logged from 4,334 to 4,375 feet under this large body of reddish shale.

One mile to the southeast of the "Surf" wells Standard Oil Co. in its well No. "Pacific Ranch" 1-A, encountered good oil showings at 3,910 feet, but failed to secure production due to water difficulties. This well was drilled below 5,200 feet and cores of oil sands were obtained showing slight saturation between 3,900 and 4,600 feet. The sands were coarse, sharp granitic sediments showing slight alteration. It is possible that this well reached the Vaqueros of the Middle Miocene as the Puente to the south is of very slight thickness.

The formations from which the "Surf" wells produce may be correlated with those in Standard Oil Co. well No. "Talbert Community" 1 and Petroleum Midway Co., Ltd., well No. "Brown" 1, to the north. The showings obtained in Standard Oil Co. well No. "Farnsworth" 1 and cores obtained in Union Oil Co. well No. "Newland" 3 and Shell Co. of California well No. "Davenport" 6 may also be correlated with the Surf zone.

Standard Oil Co. has drilled three wells, No. "Huntington B" 2, "Huntington B" 10, and "Huntington B" 19, one-half mile southwest of the discovery well No. "Huntington A" 1, and within one-half mile of the ocean. Although these wells are located west of the limit of production on the monocline, production of 28 gravity oil was obtained from the formations between 4,000 and 4,200 feet. No correlation between these wells in the main portion of the field is feasible as Standard Oil Co. wells No. "Huntington A" 5 and "Huntington B" E1A, failed to locate these productive formations. Above the productive zone in these wells on the "Huntington B" lease

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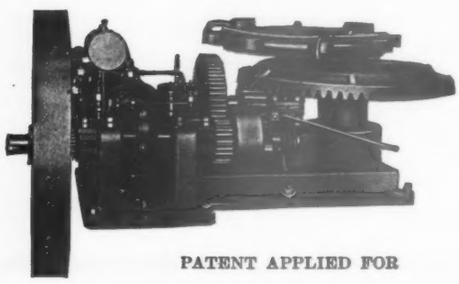

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the formations consist of 600 feet of hard dark shale, which suggest the correlation of this area with that of the "Surf" wells to the south. Careful study of the logs of these wells indicate that they have penetrated formations below the horizon of the Ashton zone.

OPERATIONS REPORTED IN OKLAHOMA FIELDS

(Continued from Page 131)

SE, Section 6-19-12. The same company's No. 7 Bruner, C NE SW SE, same section, produced 1,440 bbls. natural from sand at 2,142-46 feet. The same company's No. 8 Bruner, CNL SE SE, same section, was shut in as a gasser good for 8 000 000 feet of gas from sand at 1,485-1,510 feet. Minshall and others' No. 1-A Bruner, SE cor. SW NE, same section, had a 50-bbl. showing in the upper sand at 1,964-79 feet, but was dry at 2,065 feet.

Sand Springs Activity

The Sand Springs Home's No. 3 Berryhill, CNL NW NE, Section 7-19-12, produced 7,000,000 feet of gas from sand at 1,490-1,500 feet and was shut in. The same company's No. 4 Berryhill, C NW NE NE, same section, was drilling at 950 feet; No. 5, NE cor. NW NE, same section, was completing rig; No. 1 McIntosh, NW cor. SW NE, same section, topped the lime at 1,647 feet and was drilling at 1,651 feet.

The activity was extending down into Section 8-19-12, where the Six and One Oil Co. was rigging up tools for its No. 1 Town Lot, CNL NW NW, and Morgan & Hancock were rigging up tools for a twin to an old abandoned well in their No. 1 Town Lot, NW cor. of the section. Terwilleger was drilling at 1,587 feet in his No. 2-A Harrison, CEL NE SW NW, same section.

The Equity Oil & Refining Co.'s No. 2 Barnett, CNL SE NE, Section 8-19-11, was good for 8 bbls. natural from sand at 547-73 feet. The Fan Elva Oil Co. was spudding its No. 3 Harry, SW cor. SE SE, Section 18-19-10.

Southeast of Tulsa, in the same county, A. J. Elliott had a machine in place for his No. 2 Bruner, CSL NE SW, Section 9-18-13. Powder & Pomeroy were drilling at 1,000 feet in their No. 4 Bruner, SE cor. SW, same section, and Upp & Nepp were drilling below 800 feet in their No. 1 Franklin, SW cor. SE, same section. May Bros. shot their No. 1 Rentie, CEL SE SE SW, Section 16-18-13, with 40 quarts in sand at 1,600-37 feet but it responded with only 2 bbls. Pouder & Pomeroy had a 100-bbl. producer in their No. 2 Rentie, NE cor. NW, Section 16-18-13, after a 60-quart shot in sand at 1,210-30 feet. Black, Sivalls & Bryson shot their No. 3 Rentie, CNL NE NW, same section, with 40 quarts in sand at 1,004-64 feet and it was good for 50 bbls. afterward. The same company was spudding its No. 4 Rentie, CSL NW NE NW, same section. The Vick Oil Co. was below 500 feet in its No. 4 Perkins, NW cor. NE, same section.

A duster was abandoned by Obins & Webber at 2,101 feet in their No. 1-A Bruner, CSL SW SW, Section 12-18-12.

Widening Stroud Pool

In Lincoln County, the recent additions to the Stroud Pool were causing a widening of the circle of activity. The Roxana Petroleum Corp. was building a rig for its No. 6 Zollers, NW cor. SW SW, Section 1-14-6, and the Union Petroleum & Supply Co. had a rig on the ground for its No. 2 Jackson, NE cor. SE SE, Section 2-14-6. Another rig on the ground was for the Amerada Petroleum Corp.'s No. 5 Lewis, CSL SE SE NW, Section 12-14-6. The Roxana Petroleum Corp. was building rotary rigs for its No. 1 Brace, CNL NE SW, and for No. 2 Brace, NE cor. NW SW, Section 12-14-6. The J. C. Cooke Oil & Gas Co. had a rig up for its No. 1 E. DeLozier, SE cor. SW SW, Section 15-14-6. In the next township west, a rig was on the ground for the Jennings Bros.' No. 1 Wilson, SE cor. SW NW, Section 18-14-5. Farther north, the McMan Oil & Gas Co. was spudding its No. 1 Bowers,

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NE cor. SW, Section 1-15-6, at 192 feet, and Flynn & Morgan were spudding their No. 1 Smith, SW cor. SE, Section 34-15-5.

In Okmulgee County, the Hazlett Bros. had a 25-bbl. natural well in their No. 3 Freeman, SE cor. NE, Section 7-13-15, from sand at 2,195-2,201 feet. Eagle Picher's No. 1 Burgess, NW cor. Section 26-12 12, was good for 20 bbls. natural after plugging back from 2,800 feet to sand at 2,439-53 feet.

New work was progressing rapidly in the 9-9 country of Hughes County in spite of recent discouragements.

The Kingwood Oil Co. was spudding its No. 3 Davis, C SW SW SW, Section 3-9-9. T. B. Slick and others lost the hole at 500 feet in their No. 1 Grayson, SW cor. NW NE, same section, and were skidding the rig 30 feet north. The Papoose Oil Co. had a rig in place for its No. 5 Alexander, C NW SW SE, Section 4-9-9. The same company made a location and was moving in material for its No. 6 Alexander, C SW NE SE, same section, and had a rig up for its No. 7 Alexander, C NE SW SE, same section. Other rigs were on the ground for the same company's No. 8, C SE SE SE, Section 4-9-9, and for the New York Oil Co.'s No. 1, C SE SE NW, same section. The Transcontinental Oil Co.'s No. 1 Tiger, C SE SE NE, Section 5-9-9, was drilling at 3 080 feet after finding 2,000,000 feet of gas in sand at 3,025-33 feet, dry sand at 3,033-45 feet, and a hole full of water from sand at 3 045-65 feet. The H. F. Wilcox Oil & Gas Co. was drilling at 400 feet in its No. 1 Brown, C SE SE NW, Section 17-9-9, and the Josie Oil Co. was spudding its No. 1 Manley, C SW SW NE, Section 22-9-9.

Garfield County

In Garfield County, the Sinclair Oil & Gas Co.'s No. 24 Walker, CEL SE SE, Section 24-22-4w, was good for 110 bbls. natural from sand at 2,282-95 feet. Gravity of this oil tests 43.5 degrees. The same company shot its No. 10 E. Kisner, SW cor. SE NE, Section 19-22-3w, with five quarts and it was pumping 40 bbls. of 43 5 gravity oil afterward from sand at 1,438-48 feet.

In Logan County, McMann & Ladd had a rig up for their No. 1 Fields, SW cor. NE SE, Section 35-17-4w.

In Kingfisher County, Brissey & Hines were drilling their No. 1 Pool, SE cor. Section 25-17-5w, at 2,120 feet.

In Grady County, Fred Luginbyhl was building a rig for his No. 1 C. E. Gray, C SE SW, Section 30-5n-6w. The Ohio Oil Co. was also building a rig for its No. 2 School Land, C NW NW, Section 36-5n-8w.

In the southeastern corner of Caddo County, Briscoe & Hall had a rig in place for their No. 2 Hedlund, SW cor. SE NE, Section 11-5n-9w. The Waldo Drilling Co. was drilling its No. 8 McKenna, NW cor. NE SE, Section 11-5n-9w, at 190 feet. The Flora Okla Oil Co.'s No. 7 Waggoner, CEL SW SW SW, Section 12-5n-9w, was good for 35 bbls. from sand at 1,883-2,400 feet.

LAMB POOL EXTENDED INTO NOWATA COUNTY

NOWATA, Okla., April 18.—The Red Bank Oil Co. has completed the first deep producing well ever drilled in Nowata County. The company's No. 1 Graham, located in Section 16-29-16, 250 feet south of the Kansas State line and 500 feet south of the nearest production in the Lamb Pool, in Montgomery County, Kansas, found the pay at 1,236 feet and the well was good for from 250 to 300 bbls. the first 24 hours.

Nowata County is one of the oldest producing districts in Oklahoma, but the Bartlesville sand here is very shallow and the Red Bank well, which would be considered a shallow well in some Oklahoma Counties, is regarded here as a deep well.

The extension of the Lamb Pool into Oklahoma is considered of great importance locally and is expected to be followed by an active drilling campaign near the Red Bank Oil Co.'s well.

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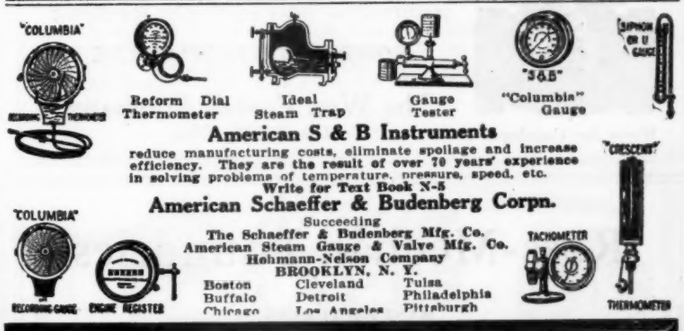
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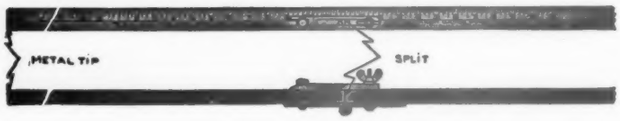

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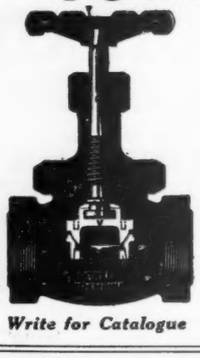

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Paulding County, O., Wells Are Recalling Earlier Drillings

By Whit

FINDLAY, Ohio, April 19.—There were quite a number of wells drilled in western Paulding County about 25 years ago, or when Trenton Rock oil was at rock bottom prices, and not one failed to make a favorable showing, but about that time gushers galore were being found in other sections that attracted attention from wildcat ventures that would not flow heavily, and the territory was forgotten until now. A list of these wells is given by sections and townships of the Paulding County area.

Paulding Township: Well showing considerable gas was drilled just south of the town of Paulding, south of Flat Rock Creek, in the eastern part of Section 13. Near the northeast corner of Section 14, and north of the same creek, and a short distance southwest of Paulding, had a nice showing of oil.

Well drilled just north of the town of Worstville, a village on the Nickle Plate and just east of Payne, was located near the center of the west line of Section 32, and approximately 3 miles east of Payne, which also showed for a small well.

Harrison Township: Well drilled near the center of the north line of Section 10, Harrison Township, north side of South creek, about 5 miles north of Payne and about 2 miles south of Antwerp, would have made a commercial producer, had it remained on the pump after completion. This well had an excellent showing and was rated as good for 45 bbls. To the southeast about 2 miles, three other wells were drilled. Two were in the northwest corner of Section 13, and one would have made an exceptionally good producer. The third well was near the northeast corner of Section 14.

In the southeast corner of Section 22, about 2 miles north of Payne, oil was found years ago, as was the case with two wells drilled along the west line of Section 33, nearly 2 miles west of Payne and not far removed from the three wells that are producing for the U. S. A. Oil Co. Harrison township is located directly west from Paulding Township and runs to the Ohio-Indiana State line.

Benton Township: This township is located south of Harrison Township and had quite a number of tests years ago; every one made a showing worth while now, but not at that particular time. Just outside the town of Payne in Section 2, three wells were drilled, all showing worth while production, but the low price of crude made them of little value at a 30- to 60-cent market and no nearby pipe lines to handle the production.

In the northwest corner of Section 6, up against the State line and 4 miles west of Payne, is another well that should have been on the pump years ago. Two miles to the south was a similar test in the northwest corner of Section 18, and another in the southwest corner of Section 19 and to the south about 2 miles from the well in Section 18. Still farther south two wells were drilled in the northwest quarter of Section 30. These five tests were close to the Ohio-Indiana State line. Oil was also found in an old well drilled near the center of the west line of Section 14, about 2½ miles south of Payne.

Near the center of Section 34, oil was found in good quantities in an old well drilled, and 1 mile east of this well another near the center of Section 35, and south of Blue creek that would make an oil man jump with glee could such wells be found these days in the Trenton Rock. Still farther to the east near the center of Section 36, also south of Blue creek was another excellent looking well.

Blue Creek Township: In the southwest corner of Blue Creek Township, 5½ miles south and 2½ miles east of Payne, about 1 mile or so west of the hamlet of Tipton, an old time test would have made a commercial producer, even when

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oil was cheap. This well is about two miles directly east of the wells that made such fine showing in Section 35 and 36 of Benton Township, and about a half mile north of the Paulding-Van Wert county line.

From 16 to 20 miles east of the town of Payne, paying production has been found near Melrose in Brown Township, near Roselms, in Washington Township, and near Grover Hill, in Latty Township, so it looks as though Paulding County with its present showings from the east and to the west end of the county, should see much development work with the present prices of crude. Even small wells hooked onto power, at existing prices, are a good source of income, and the expense of operating is nothing like it is in the deeper sand fields. The oil is found at depths varying from 1,300 to 1,500 feet. Contract work is cheaper than in many other fields. An important test is soon to be started between Briceton and Latty along the Nickle Plate railroad, in Paulding Township.

TESTS BEING DRILLED BY COLONEL HUMPHREYS

DALLAS, Tex., April 18.—Five tests are being drilled in various sections of Texas by the Boyd Oil Co., of which Col. A. E. Humphreys is the head, Colonel Humphreys announced. One is at Nocona, in Montague County, another at Prairieville, in Kaufman County, one at Kerens and one at Richland, in Navarro County, and one in Webb County. The company has 32,000 acres under lease in Webb County.

This company is the major one of the Humphrey's interests since the Pure Oil interests bought the Humphreys Oil Co. property.

The Boyd Oil Co. may also drill in Utah, Oklahoma and Kansas, Colonel Humphreys said. Colonel Humphreys is spending much of his time in Dallas now, directing the affairs of the Boyd Oil Co., from the head offices here.

REPORT BRITISH BUY INTO LAGO PETROLEUM

Reports reaching Tulsa state that the British-Mexican Petroleum Co., Ltd., owned by the large shipbuilding interests in Great Britain, has acquired a substantial interest in the stock of the Lago Petroleum Co., which holds a large oil concession in Venezuela, and which recently completed its first well there for an estimated initial production rated as high as 40,000 barrels daily. The price paid by the British interests for the Lago stock was said to be above the present market value of the shares.

The British-Mexican Petroleum Co. was organized jointly by those now in control and the Pan-American Petroleum and Transport Co. in 1919. The Pan-American interests sold out in 1923. The Lago Petroleum Co. is controlled by J. S. Cosden, Harry Payne Whitney and Henry Greis. Mr. Greis is president.

OPPOSE VACUUM PUMP PERMIT FOR TONKAWA

OKLAHOMA CITY, Okla., April 21.—The Commissioners of the Land Office have instructed their attorney, Judge George E. Merritt, to oppose granting of a permit to McCaskey & Wentz, of Ponca City, to install a vacuum pump in the southwest quarter of Section 34-25-1w, Tonkawa Field, hearing to be on April 8, before the Corporation Commission, where an application has been filed. W. A. Durant, secretary to the commissioners, declares it would be a precedent dangerous in the Tonkawa territory this early in the era of development to permit use of a vacuum pump.

The commissioners have rejected an application from Lincoln County to relinquish the royalty involved in a land mortgage held by the State in order that the oil and gas royalty may be sold. It was announced that no such relinquishments will be made.

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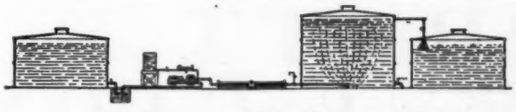

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SULPHUR DISTRIBUTION IN CRUDE PETROLEUM

(Continued from Page 135)

of the original crude. To convert the figures in Table 2 to the same basis as Table 1, it is necessary to multiply them by 85.5 per cent. It has been thought better, however, to base this table on the fuel oil which was used, as the process of extraction cannot be considered as commercial in any sense, and the figures obtained are simply comparative. The original fuel oil and the extracted oil were each distilled in the same way that the original crude was distilled, as described above. Each sample was first distilled in the 500-c. c. analytical Hempel still and fractions called "kerosene" in Table 2 (boiling up to 275 degrees C. (527 degrees F.) at atmospheric pressure) and "gas oil and lubricating oil" (distilling above kerosene but below 300 degrees C. (572 degrees F.) at 40 mm. pressure) were obtained. A residuum was left in each case.

Table 2 gives the percentage by weight of each cut of the original fuel oil and the percentage of sulphur in each cut, the percentage of the total sulphur in the fuel oil, the amount of gas evolved in each distillation and the percentage of total sulphur in gas. In the same way the two samples were each distilled to coke in the 2-gallon coke still.

As the amount of extracted oil available was limited it was thought best not to try to make separate cuts on this distillation; accordingly figures are given for the entire amount of distillate obtained from this distillation. Thus the cracked distillate includes the straight-run kerosene (the original straight-run gasoline having been removed from the fuel oil in the first place), the cracked gasoline, also cracked kerosene and cracked gas oil and lubricating oil. The cracked distillate in each test was then rerun in the 500 c. c. Hempel still, and the cracked tops and cracked gas oil and lubricating oil fractions were thus separated from the residuum. An inspection of the figures given in Table 2 shows that, as stated above, the major part of the original sulphur collects in the gases and in the residuums, but, as would be expected from the analysis of the asphalt, the amount of sulphur in the products made from the extracted oil is much lower than the sulphur in the products from the fuel oil. It is also interesting to note that, as stated before, the percentages of sulphur in distillates of the same boiling range are very similar, although the distillates themselves may have been obtained in different ways. For example, the "cracked tops" from the fuel oil which must have contained some material derived from the asphalt and the "cracked tops" from the extracted oil from which the asphalt has been entirely removed contain practically the same percentage of sulphur. Also the gas oil and lubricating oil fractions from these two distillations contain practically the same percentage of sulphur, and this percentage is practically the same as that in the similar fraction which was derived from the original crude. (Table 1).

Conclusions

A large percentage of the total sulphur in the crude is combined in the form of a black brittle asphalt which is insoluble in acetone but soluble in benzene. However, even if this asphalt is entirely removed from the crude, there is still left about 70 per cent of an oil which must be classed as a "high sulphur" crude and the figures given in Table 2 indicate that the sulphur derivatives in the oil are not unlike the sulphur derivatives in the asphalt. This raises the question as to whether what might be called "proto-asphalt" exists in the oil, and this in turn suggests a possible series of reactions by which the sulphur compounds may have been formed.

Assuming that the crude oil originally contains a very small amount of sulphur and comes in contact in the ground either with elementary sulphur or with some unstable sulphur compound at a tempera-

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ture such that sulphur will react with the oil, it seems probable that a series of sulphur compounds might be formed.

If the contamination with sulphur is sufficient in amount and the reaction takes place over a sufficiently long period of time, these sulphur compounds, which collectively might be called "proto-asphalt," might be converted into true asphalt of high sulphur content. At a still later stage in the reaction oil-insoluble asphalt might be formed which would precipitate out of the oil; in fact, given sufficient sulphur and sufficient time and temperature, all of the oil might be converted into a solid asphaltic mass. Or it may be possible that Mexican crude as we know it is only a portion of the original crude, and that it is the liquid portion consisting of unaltered hydrocarbons, of sulphur derivatives and dissolved asphalt, which has migrated from its original source, leaving behind deposits of insoluble asphalt of extremely high sulphur content. These ideas are, of course, advanced merely as tentative, and it is fully recognized that a great deal of experimental work will be required before any final conclusions can be drawn.

EXHAUST GAS ANALYSIS

The Diesel engine, which has the reputation of giving the highest thermal efficiency of all prime movers, burns a mixture indicating an enormous quantity of excess air. In the engines examined by a writer for Oil Engineering and Finance, which were stationary Diesel engines operating at a speed of 250 revolutions, with a compression pressure of approximately 400 pounds per square inch, and burning American light fuel oil, the maximum thermal efficiency was obtained when the mean effective pressure was in the region of 95 pounds per square inch. An exhaust gas analysis indicated that under these conditions, the fuel mixture burned in the cylinder contained 120 per cent excess air. Instead of using 100 units of air, theoretically necessary to burn a given quantity of oil, the engine was actually using 220 units of air, 120 of which passed through the engine unchanged. The engines in question were of the 4-stroke cycle, employing blast air injection and the cauculation of fuel ratios from the exhaust gas can be considered as fairly correct, the scavenging in this type engine being very effective.

Classified Advertisements
Pages 124-125-126

Bids Asked For Sale of Teapot Casinghead Gas

Under and by virtue of an order of the Federal Court, District of Wyoming, the Receivers of Naval Reserve No 3 (Teapot Dome) will receive sealed bids up to and including April 26, 1924, for the casinghead gas from the wells on the Reserve. All bids submitted must contain a provision for saving the residuum gas and returning it to the lease for operating the property. All bids should be addressed to or filed with William E. Mullen, Hynds Building, Cheyenne, Wyoming, Attorney for the Receivers, who reserves the right to reject any or all bids.

W. E. MULLEN,
Attorney for Receivers.

FOXBORO ORIFICE METER

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OIL FIELD MAPS
TEXAS
ARKANSAS
LOUISIANA
OKLAHOMA
CALIFORNIA
SPECIAL DRAFTING

Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS

Pipe Line Statement for February Runs

*Prairie Pipe Line Co.	2,460,000	84,828
Gulf Pipe Line Co.	1,063,788	35,682
Texas Pipe Line Co. of Oklahoma	423,024	14,587
Magnolia Petroleum Co.	920,560	31,743
Empire Pipe Line Co.	929,070	32,037
Cosden Pipe Line Co.	605,092	20,865
Sinclair Pipe Line Co.	1,231,340	42,460
*Other lines	6,352,160	219,040
Total February	13,985,034	482,242
Total January	14,231,324	459,075
Difference	246,190	23,167

Shipments

†Prairie Pipe Line Co.	3,475,176	119,833
Gulf Pipe Line Co.	1,012,413	34,911
Texas Pipe Line Co. of Oklahoma	914,749	31,543
Magnolia Petroleum Co.	956,906	32,997
Empire Pipe Line Co.	881,560	30,399
Cosden Pipe Line Co.	816,200	28,145
†Sinclair Pipe Line Co.	2,118,152	73,040
*Other lines	6,090,000	210,000
Total February	16,265,156	560,868
Total January	16,167,466	494,512
Difference	97,690	66,356

Stocks

*Prairie Oil & Gas Co.	21,400,000
*Prairie Pipe Line Co.	2,000,000
Gulf Pipe Line Co. and Gypsy Oil Co.	9,131,440
The Texas Co.	6,854,251
Magnolia Petroleum Co.	8,224,111
Empire Pipe Line Co.	2,718,119
Cosden Pipe Line Co.	2,841,319
*Sinclair Crude Oil Purchasing Co.	29,800,000
Carter Oil Co.	17,198,326
*Other lines	8,300,000
Total February	108,467,566
Total January	109,804,236
Difference	1,336,670

*Estimated. †Includes shipments of Texas crude oil.

Note—Stocks do not include approximately 8,400,000 barrels of crude oil held in storage on private tank farms and leases.

Daily Average Runs

Runs from Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for January and February:

	Jan., '24	Feb., '24
Nat. Transit	102,145.05	164,316.99
S. W. Pa. P. L.	75,867.98	75,321.17
Eureka P. L.	350,434.47	357,928.89
Buckeye P. L. (Macksburg)	237,151.15	228,048.15
Buckeye P. L. (Cleveland)	14,866.42	14,278.73
Buckeye P. L. (Lima, etc.)	110,313.18	122,684.93
Indiana P. L.	9,356.14	11,250.90
Cumberland P. L.	344,629.61	344,250.58
N. Y. Transit	15,265.52	14,834.30
Tide Water P. L.	129,856.05	128,723.76
Pure Oil P. L.	172,525.43	167,959.35
Emery P. L.	31,818.49	31,706.85
Indian Ref.	215,082.21	234,580.56
Paragon Dev.	34,719.69	38,179.55
Pittsburgh P. L.	7,823.93	7,701.68
Swiss P. L.	.....	.....
Riggs Ref.	3,888.20	4,206.43
Union P. L.	23,508.87	24,152.23
Fords Brk. P. L.	631.73	655.64
Allegany P. L.	1,891.17	2,000.04
Total	1,941,775.28	1,972,675.82
Daily average	62,637.91	66,023.30

Note—Indian Refining Co. also reported other receipts of 91,633.60 bbls. Paragon Refining Co. had other receipts of 152,545.85 bbls. Paragon Development Co. had other receipts of 5,276.58 bbls. Pittsburgh Pipe Line had other receipts of 4,362.53 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for January and February:

	Jan., '24	Feb., '24
Nat Transit	426,819.09	426,252.43
S. W. Pa. P. L.	269,170.78	254,674.24
Eureka P. L.	129,413.00	155,109.82
Buckeye P. L. (Macksburg)	67,330.99	61,022.93
Buckeye P. L. (Cleveland)	1,156.64	1,214.08
Buckeye P. L. (Lima, etc.)	978,045.64	729,091.57
Indiana P. L.	972,144.64	931,034.16
Cumberland P. L.	113,426.98	135,557.40
Southern P. L.	.....	.....
Crescent P. L.	78,215.84	17,687.64
N. Y. Transit	507,367.42	537,501.53
Northern P. L.	71,185.07	86,071.93
Tide Water P. L.	144,200.91	172,436.35
Pure Oil P. L.	180,009.86	171,466.69
Emery P. L.	32,135.00	30,015.92
Paragon Ref.	118,952.70	122,507.36
Indian Ref.	391,492.52	334,496.32
Paragon Dev.	35,274.72	41,926.73
Pittsburgh P. L.	8,956.90	8,857.43
Swiss P. L.	.....	.....
Riggs Ref.	.....	.....
Union P. L.	32,833.37	23,446.95
Fords Brk. P. L.	991.38	412.00
Allegany P. L.	2,148.47	1,731.89
Total	4,511,060.92	4,313,216.96
Daily average	145,518.09	148,731.62

Note—Indian Refining Co. also reported other deliveries of 34,226.64 bbls.

Gross Stocks

The gross stocks held by various pipe lines in the oil producing section of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky at the close of January and February were as follows:

	Jan., '24	Feb., '24
Nat. Transit	1,250,338.74	1,151,603.34
S. W. Pa. P. L.	759,960.40	841,472.05
Eureka P. L.	1,836,499.03	1,803,132.43
Buckeye P. L. (Macksburg)	632,211.69	637,752.28
Buckeye P. L. (Cleveland)	26,241.19	23,476.72
Buckeye P. L. (Lima, etc.)	3,397,306.24	2,865,736.55
Indiana P. L.	638,442.92	639,362.77
Cumberland P. L.	624,657.62	579,500.49
Southern P. L.	951,853.00	629,869.39
Crescent P. L.	68,019.82	50,361.96
N. Y. Transit	1,269,952.57	1,074,434.97
Northern P. L.	631,804.84	720,807.30
Tide Water P. L.	.....	.....
Pure Oil P. L.	404,795.46	401,174.31
Emery P. L.	4,299 94	5,814.65
Paragon Ref.	169,490.48	200,969.72
Indian Ref.	233,320.15	183,532.05
Paragon Dev.	13,103.77	14,353.98
Pittsburgh P. L.	7,758.49	8,512.90
Swiss P. L.	.....	.....
Riggs Ref.	633.40	632.31
Union P. L.	10,777.00	11,306.07
Fords Brk. P. L.	146.32	367.54
Allegany P. L.	597.88	894.40
Total	12,907,201.94	11,844,068.08
Decrease	537,159.12	1,063,133.86

Grades of Oil

The following table shows the amount of the different grades of oil held by the Eastern pipe lines at the close of January and February, showing the gross stocks of the above fields:

	Jan., '24	Feb., '24
Pennsylvania	4,109,737.40	4,019,060.62
Lima	961,116.62	981,570.80
Kentucky	1,725,967.07	1,569,281.44
Mid-Continent	5,880,754.57	5,207,220.78
Illinois	229,626.28	66,934.43
Total	12,907,201.94	11,844,068.08

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1921	1922	1923	1924
January	64,460	67,702	75,790	62,638
February	70,054	75,096	71,093	68,023
March	68,555	78,531	76,592	.....
April	65,036	75,462	76,614	.....
May	65,466	77,592	77,365	.....
June	62,438	76,193	77,592	.....
July	69,486	76,435	71,879	.....
August	64,888	79,387	76,910	.....
September	60,110	78,512	72,358	.....
October	57,688	77,209	76,256	.....
November	58,470	76,313	70,762	.....
December	61,000	73,351	69,271	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for past four years:

	1921	1922	1923	1924
January	115,560	119,792	171,067	145,518
February	96,736	111,362	164,219	148,732
March	84,168	127,753	185,487	.....
April	101,015	127,068	179,751	.....
May	100,253	127,840	177,102	.....
June	105,037	137,638	173,598	.....
July	97,096	137,872	168,330	.....
August	101,662	153,275	142,766	.....
September	117,440	158,761	137,266	.....
October	105,728	165,345	134,597	.....
November	121,803	165,677	131,426	.....
December	104,023	172,861	139,909	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines, at the close of each month for the past three years:

	1922	1923	1924
January	16,297,858	14,040,867	12,907,202
February	17,009,293	14,028,427	11,844,068
March	16,877,937	13,873,146	.....
April	16,777,842	13,737,675	.....
May	16,945,962	13,815,623	.....
June	16,870,169	14,041,253	.....
July	16,669,286	14,645,534	.....
August	16,235,229	14,775,539	.....
September	16,228,545	14,803,444	.....
October	15,757,746	14,504,111	.....
November	15,171,972	14,157,726	.....
December	14,323,765	13,444,361	.....

Franklin Pipe Line Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above:

	Receipts	Shipments	Stocks
1923—			
February	2,692.93	932.33	24,017.61
March	2,978.88	12,417.00	24,578.49
April	3,529.12	3,084.09	25,053.52
May	3,538.73	4,356.42	23,736.23
June	2,927.71	4,743.78	21,920.16
July	2,996.64	1,471.57	23,445.23
August	3,199.07	3,769.34	22,874.96
September	2,829.79	5,822.36	19,882.37
October	2,694.23	5,251.81	17,324.79
November	2,980.66	4,150.96	16,154.47
December	2,893.07	3,495.27	15,552.27
1924—			
January	2,942.19	8,641 71	9,842.75
February	2,151.78	1,926.55	10,072.98

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, March 1	2,163,393.13
Runs from wells	566,697.06
Other receipts	173,944.61
Regular deliveries	286,314.14
Other deliveries	309,374.20

The amount of Illinois oil run by the Tide Water Pipe Line Co. in February was 27,393.64 barrels, and deliveries were 66,699.00 barrels. Adding these figures to those of the Illinois Pipe Line Co., makes the runs and deliveries from the Illinois Field as follows:

	Runs	Deliveries
1923—		
February	496,421.79	382,566.53
March	625,006.81	472,920.71
April	521,910.87	423,548.43
May	624,107.98	523,515.06
June	582,511.82	461,252.00
July	594,653.42	483,269.17
August	594,747.94	367,152.23
September	542,561.59	305,925.60
October	576,867.09	347,813.83
November	546,853.43	255,693.09
December	534,186.04	282,543.43
1924—		
January	493,337.25	280,792.09
February	536,490.70	353,613.34

The Tide Water Pipe Co., Ltd., also delivered in February 222,509.40 barrels of Oklahoma oil. The total deliveries of all grades by the Tide Water were 461,565.39 barrels.

AVERAGE WEEKLY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF PORTS

Av. bbls. per wk.—	ATLANTIC PORTS Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS Galveston	New Orleans Baton Rouge	Pt. Arthur Sabine Pass	Tampa	Total	Total All Ports
November	136,731	36,281	659,169	156,800	85,769	1,074,031	.....	219,331	.....	.....	219,331	1,293,362
December	122,803	48,545	609,903	163,485	154,224	1,098,960	.....	164,885	.....	.....	164,885	1,263,845
January	138,800	15,400	665,400	160,400	100,600	1,080,600	.....	172,000	.....	.....	172,000	1,252,600
February	90,250	36,250	832,000	208,250	36,250	1,203,000	.....	195,250	.....	.....	195,250	1,398,250

AVERAGE WEEKLY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

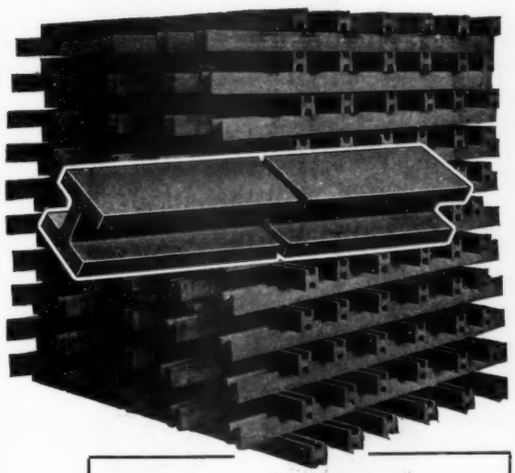
Av. bbls. per wk.—	ATLANTIC PORTS Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS Galveston	New Orleans Baton Rouge	Pt. Arthur Sabine Pass	Tampa	Total	Total All Ports
September	53,600	113,000	353,200	132,000	149,600	801,400	255,200	279,400	176,000	44,800	714,200	1,515,600
October	91,250	48,000	198,500	134,000	304,000	800,750	247,000	352,500	95,000	12,500	707,000	1,507,750
November	67,200	108,869	270,669	122,500	195,060	764,200	345,490	359,331	147,469	33,367	885,731	1,649,931
December	105,000	133,679	240,254	144,739	300,545	924,217	420,224	492,709	186,949	51,258	1,151,140	2,075,357
January	112,800	118,200	552,000	97,800	215,800	603,200	358,800	248,000	137,800	20,800	772,200	1,375,400
February	134,750	175,750	195,250	102,750	299,250	907,750	372,500	296,000	190,250	36,500	895,250	1,803,000

GROSS PRODUCTION BY MONTHS AND DAILY AVERAGE IN THE U. S. FOR 12 MONTHS

		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Wyoming-Montana	Other fields	Total
1923—										
March:	Month	19,608,192	13,958,828	9,176,520	2,588,531	2,834,330	2,334,765	3,358,011	3,469,397	57,328,574
	Daily average	632,522	450,188	296,017	83,501	91,430	75,315	108,323	111,935	1,849,309
April:	Month	20,695,959	14,399,610	8,548,661	2,624,420	2,893,290	2,324,800	3,670,954	3,286,090	58,343,814
	Daily average	689,965	479,987	284,955	87,481	96,443	74,160	122,366	109,536	1,944,794
May:	Month	21,535,265	15,658,782	8,826,829	2,852,217	3,250,846	2,398,804	3,650,903	3,550,357	61,624,103
	Daily average	694,689	505,122	284,736	92,007	104,866	74,155	117,771	114,527	1,987,874
June:	Month	22,667,106	15,672,730	9,129,282	2,797,830	3,401,172	2,086,670	3,470,176	3,413,155	63,638,131
	Daily average	755,570	519,091	304,309	93,261	113,372	69,392	115,672	113,771	2,084,694
July:	Month	25,262,082	15,260,184	11,258,042	2,448,566	3,713,738	1,882,481	4,245,547	3,334,110	68,004,750
	Daily average	814,906	492,364	382,518	78,986	119,798	60,725	136,953	107,552	2,193,702
August:	Month	26,440,005	14,049,076	12,157,429	2,316,320	3,292,580	1,952,349	4,290,406	3,479,077	67,977,243
	Daily average	852,903	453,196	392,172	74,720	106,212	62,979	138,400	112,228	2,192,874
September:	Month	25,762,487	12,812,220	12,879,682	2,234,730	3,164,900	1,787,430	4,861,550	3,269,551	66,972,550
	Daily average	858,750	427,074	429,323	74,491	105,497	59,581	162,052	105,468	2,232,418
October:	Month	24,576,400	12,961,782	15,933,383	2,336,346	3,120,274	1,837,990	3,540,880	3,476,913	67,783,968
	Daily average	792,787	418,122	513,980	75,366	100,654	59,290	114,222	112,126	2,186,577
November:	Month	22,397,848	12,334,620	15,656,507	2,268,840	2,973,000	1,816,860	4,792,466	3,138,464	65,378,605
	Daily average	746,595	411,154	518,550	75,628	99,100	60,562	159,782	104,615	2,179,535
December:	Month	21,899,247	12,232,259	10,065,856	2,345,150	4,017,850	1,919,574	4,304,326	3,147,812	61,932,074
	Daily average	706,427	394,589	324,705	75,650	129,608	61,922	106,591	101,542	1,901,034
1924—										
January:	Month	20,912,500	12,115,353	10,089,291	2,254,878	3,686,630	1,827,053	4,621,295	2,955,500	59,472,500
	Daily average	674,597	397,263	325,461	72,738	118,925	58,937	149,400	96,329	1,892,650
February:	Month	19,341,226	12,236,637	10,372,024	2,112,853	3,302,750	1,697,892	4,275,706	2,997,701	56,336,790
	Daily average	666,939	421,953	357,656	72,857	113,888	58,548	147,438	103,369	1,942,648
Total twelve months		271,098,417	163,592,081	134,593,496	29,180,691	39,651,410	23,666,668	47,792,250	39,517,127	749,092,340
Daily average		740,706	446,973	367,742	79,729	108,327	64,663	130,580	107,979	2,046,700

Where Calite Beams Support the Tubes

Tubes do not sag Combustion is bettered



Calite Beams used to support tubes in modern oil stills eliminate brick walls in the combustion chamber and allow ample support so that the tubes cannot sag. Eliminating sag cuts cleaning time and cost.

Use Calite beams instead of brick walls. The resulting open combustion chamber insures uniform temperature the full length of the tubes—without cold spots where tubes are supported. Moreover, there will be no walls to deflect the flame and make it impinge on tubes.

Calite Beams retain their rigidity in temperatures as high as 2100°F. for thousands of heat hours. Calite hangers, brackets, angles, struts and baffles offer the same advantage. "Heat-Enduring Castings," our new book, goes into detail. May we send you a copy?

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Heat-Enduring

Calite Castings

No. 3 in a series of advertisements on Walworth Valves.

ANGLE VALVES—These are a few that Walworth makes

Brass (Flanged) 125 lbs.

Extra Heavy (Flanged) 250 lbs.

In its double function of globe valve and ell, the angle valve stands like a traffic cop on a corner to turn and control the flow of steam, water, gas, oil or air through the pipe.

When purchasing valves some engineers make a practice of taking one apart for examination. This is difficult to do with an inferior valve which has been made up to hold tight with some compound of lead. It can always be done with a Walworth valve.

In Walworth Angle Valves for all pressures and services you'll find a better quality of metal, better workmanship and tight joints that are not stuck together. Leaklessness is *built into* them.

Extra Heavy 250 lbs.

Brass 200 lbs.

Brass 100 lbs.

Hard Bronze 250 lbs.

Extra Heavy 250 lbs.

Jenkins Type Walworth 125 lbs.

Jenkins Type Walworth 150 lbs.

Hard Bronze 300 lbs.

Brass 125 lbs.

WALWORTH VALVES

A complete line of Valves, Fittings and Tools

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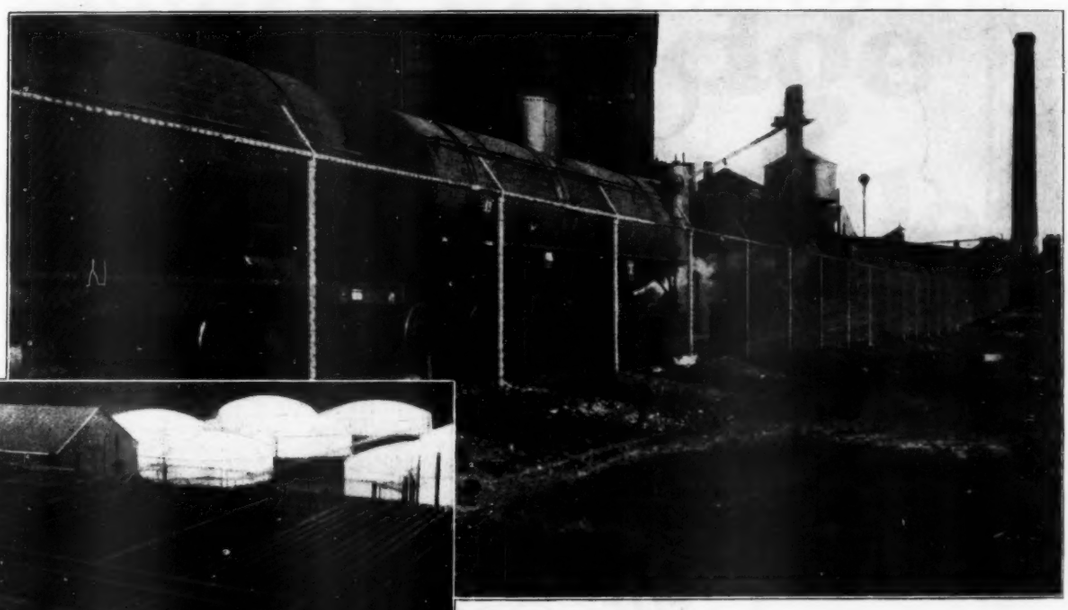
Chicago Cleveland Glasgow Kewanee, Ill. London New York Philadelphia Portland, Ore. Seattle San Francisco Youngstown. Plants at Boston and Kewanee
Walworth International Co., New York, Foreign Representative

23,000 items for Steam, Water, Gas, Oil and Air

NO WONDER THE PETROLEUM INDUSTRY CHOOSES *PAGE-ARMCO* FENCE



THE NATIONAL REFINING CO.
COFFEYVILLE, KAN.

June 22, 1922

Monongahela Tube Co.
Pittsburgh, Pa.

Gentlemen:

In June, 1915, we equipped our No. 4 condenser box with ARMCO Pipe. This box has been in continuous service up to the present time, making two runs per day.

In June, 1918, the three top rows of ARMCO Pipe were replaced with steel pipe. Six months later the steel pipe was replaced. In another half year the entire coil was removed and some of the original ARMCO Pipe was still serviceable.

THE NATIONAL REFINING CO.
(Signed) H. B. SETZLER
Superintendent

SIX times the life of steel—that's the record of ARMCO Ingot Iron Pipe in condenser boxes of the National Refining Co.

So when the Union Petroleum Co., of Westwego, La., bought a fence to protect their property, they chose Page-Armco, because it was the only fence to be had of ARMCO Ingot Iron, the most uniformly durable material used for woven wire fencing.

Tests indicate that Page-Armco fence, like ARMCO Pipe, will outlast several installations of steel fence. Write for illustrated catalog showing typical examples of property protection.

In each of the cities listed there is a Page Distributor that carries complete stocks of Page Products and will give prompt estimates and efficient service in construction.

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Connecticut New Haven	**Louisiana** New Orleans	**N. Carolina** Charlotte	**S. Carolina** Charleston
Colorado Denver	**Maryland** Baltimore	**Ohio** Ashville, Cincinnati, Zanesville	**Tennessee** Chattanooga, Memphis
Florida St. Petersburg	**Massachusetts** Boston, Springfield	**Oklahoma** Tulsa	**Virginia** Lynchburg, Richmond
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IN CANADA: Dominion Chain Company, Niagara Falls, Ont., with distributors in London, Ont.; Montreal, Que.; St. Johns, N. B.; Winnipeg, Man.

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STEEL AND WIRE PAGE QUALITY PRODUCTS

"America's first wire fence—1885"

PAGE
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ARMCO Ingot Iron

The only wire fence made of Armco Ingot Iron

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Lubricating Oils and Greases

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No. 157
500 lbs. Test Pressure

No. 122
300 lbs. Test Pressure

No. 165
1000 lbs. Test Pressure

are built into the PRATT & CADY No. 86-A Bronze Gate Valve

Fig. 86-A, for 125 pounds steam working pressure, is the well known Pratt & Cady Figure 86 standard bronze gate valve built with a rising spindle.

The solid wedge is reversible and, when both sides are worn, may be easily renewed without taking the valve from the line. It is only necessary to screw off the bonnet and the old wedge may be slipped off and a new one slipped on.

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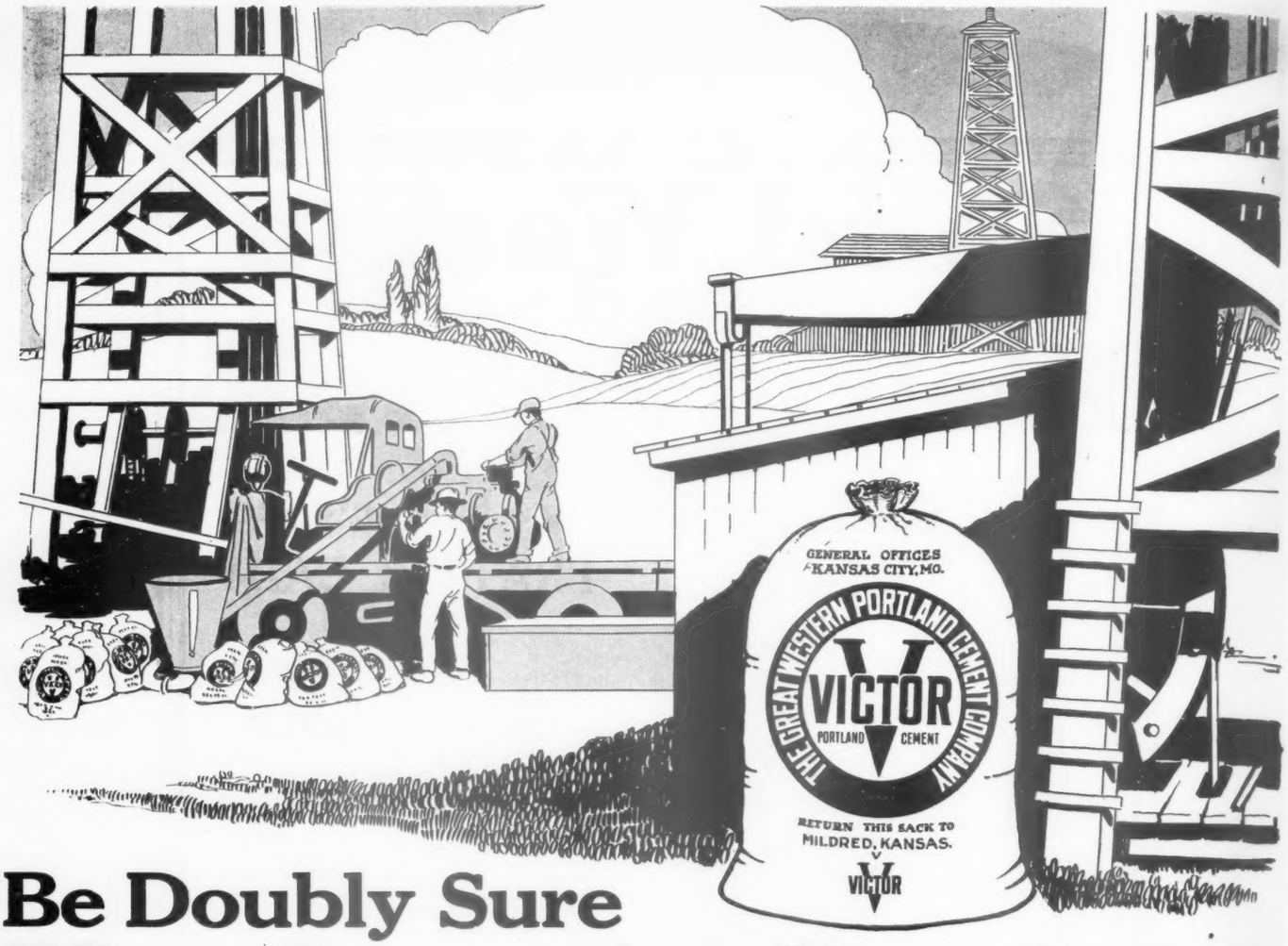

Be Doubly Sure When Cementing Your Casings

Cementing your casings when you sink a hole insures you a better-than-ordinary job.

When you use **VICTOR OIL WELL CEMENT** you are **doubly sure** of a casing that is as secure as it is humanly possible to make it!

Victor Oil Well Cement attains enormous strength a short time after being poured. This quick set and unusual early strength insures a maximum resistance to external forces such as lateral pressure, shifting formations and gas blowouts.

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Be doubly insured against broken casings, shooting "off" of shoes and seats, costly leaks, etc. Play safe and use **VICTOR OIL WELL CEMENT,** the cement "Better Than Specifications."

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Plant: MILDRED, KANSAS **General Office: KANSAS CITY, MO.**

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"Better Than Specifications"

Reduced Operating Cost Pays For This Equipment

ENGINEERS on their own initiative searched the country over for a pump to reclaim still vapors and save the ever increasing loss to refineries.

Roots Rotary Gas Pumps were examined and met every test. They were simple in design. Absence of the slightest weakness in construction meant long years of perfect service.

Roots Gas Pumps were found to be ideal for pumping uncondensed still vapors from the condensers, through absorbers and on to the power plant for use as fuel.

One refinery reported a saving of $150 per day—enough without further question to justify their installation.

It is your desire to save—then save with Roots Rotary Gas Pumps.

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ROTARY PUMPS for Gasoline, Tar, Crude and Refined Oils.

Rotary Gas Pumps for Still Vapors or Natural Gas.

Rotary Vacuum Pumps.

POSITIVE DISPLACEMENT GAS METERS.

ROTARY Blowers for Oil and Gas Burners.

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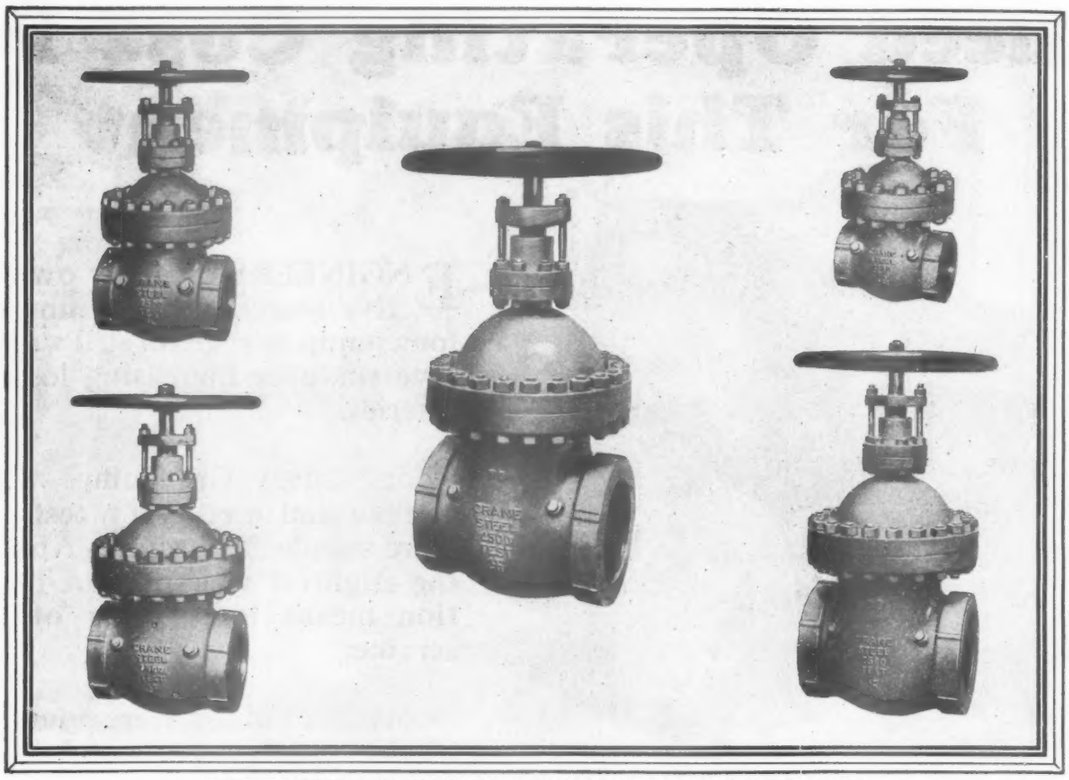

CRANE DRILLING-THROUGH VALVES, NO. 1218-H, ARE TESTED AT 2500 POUNDS PRESSURE

30,000 new wells will be drilled during 1924, according to estimates by editors of Oil & Gas Journal. This calls for an investment of approximately one and a half billion dollars. Make your share of that investment safe by using dependable materials and equipment. Crane cast steel drilling-through valves, No. 1218-H, and Crane cast steel fittings are designed and manufactured with great care to insure satisfying service.

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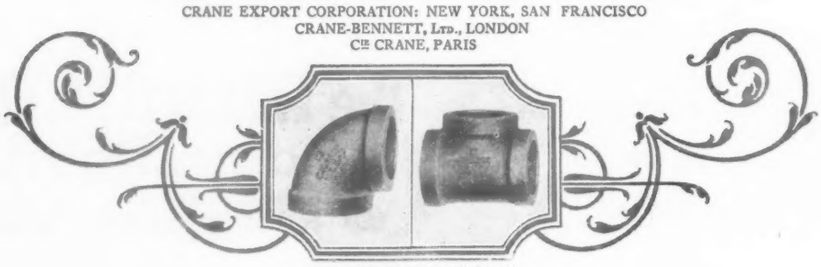
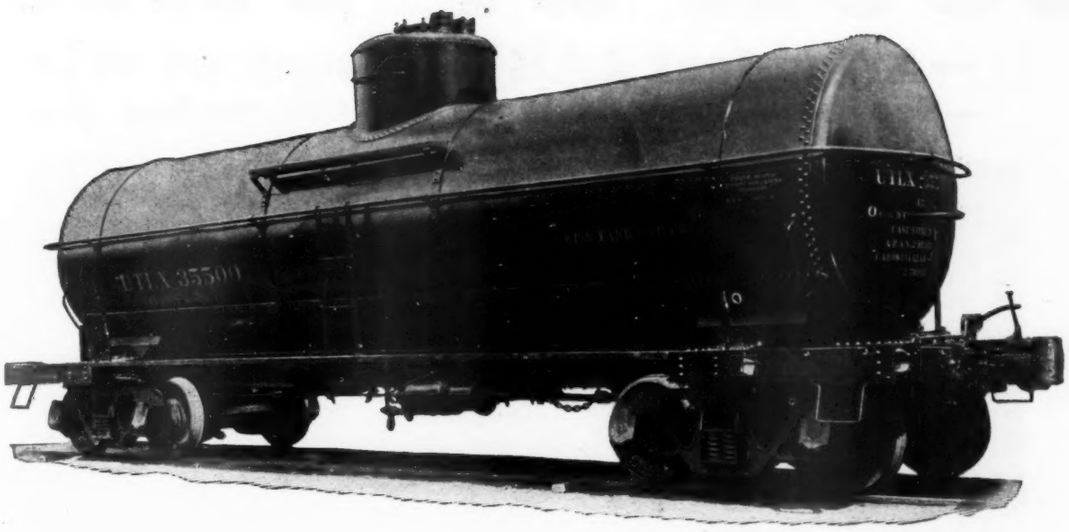


Cast steel fittings are supplied in all standard shapes and sizes



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THE Cambria plant of Bethlehem Steel Company is equipped with every modern facility to build tank cars of every class—in any capacity —for the transportation of liquid or semi-liquid products.

Cambria Steel Tank Cars are built in conformity with the specifications in use on all American railways.

Bethlehem controls the source of supply of the raw materials for the steel used in practically all of the parts of Cambria cars, which insures, not only the proper grades of steel, but also quick production with the resulting prompt deliveries.

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BETHLEHEM

CAMBRIA STEEL TANK CARS

Look at This!

—A Typical LARGE Stock of Wire Lines
—See how easy it is to get the wrong grade?

This tape tells you in PLAIN ENGLISH the grade of every line. It may save you a fishing job. Why, then, take chances on unprotected lines when the protection Williamsport provides, costs you nothing?
There's a Williamsport stock near you.

In spite of extraordinary care it's easy to make a serious mistake in reeling off the wrong grade of line, from a large warehouse stock. When this happens

YOU'LL NEED A LOT OF LUCK

A mistake of this kind can be detected instantly in

WILLIAMSPORT
WIRE **PATENTED TELFAX TAPE MARKED** **LINES**

In fact it **cannot happen** with Williamsport Lines. Our warehousemen check every line by the Patented Telfax Tape Marker, built right into and throughout the entire length of the hemp core of all Williamsport lines, by the manufacturers. Williamsport lines can change reels and exterior markings on tags and reels a hundred times, but the "Telfax" sentry—your protection—can never be changed. It **stays** with the line.

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SERVICE IN EVERY IMPORTANT FIELD

Saving Evaporation Losses Is Not Such a Big Problem After All If Your Tanks Are Right!

Butler Tanks ARE Made Right. Every Part Fits. Each individual part fills its place with precision, thereby assuring all the "tightness" necessary to make the Tank STAY TIGHT.

Butler Decks are Gas Tight as well as the bodies, and that is as they should be.

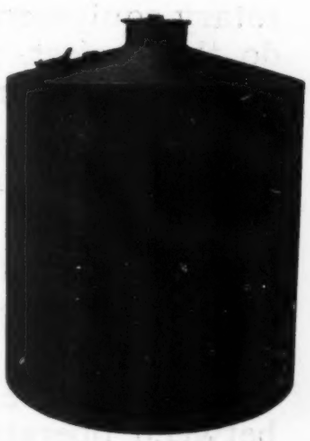
Equipped with a Butler Pressure and Vacuum Regulator all evaporation and vapor is controlled.

BUTLER BOLTED TANKS are built SCIENTIFICALLY—they do not require a lot of EXTRAS in order to function satisfactorily — THEY ARE MADE TO WORK!

Butler Bolted Tanks come in capacities including 10,000 barrels.

Butler Welded Field Tanks

These welded flow tanks are furnished in capacities from 40 to 250 barrels. They come ready to serve. Every tank is carefully inspected at the factory. They are in use throughout the country and give the greatest satisfaction possible.



Butler Gas Tight Thief Hole Hatches

These hatches are regular equipment on Butler Tanks. They are specially machined and properly weighted to withstand two ounces of pressure whether they are fastened down or not. Easily opened by simply placing one foot on the extended lever which easily raises the cover.

Can be placed on tanks you may now have in service.

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Can Be Put in the LeBUS SLIP-SOCKET OVERSHOTS and your confidence strengthened when you have put it under actual test.

The LeBus Overshots have exclusive features for the protection of your dollars invested.

For many years rotary drillers have had only makeshift fishing tools, which has proven costly many times.

But today there is a crying demand for better and and more dependable rotary equipment. Tools that will do the easiest, and most difficult job in a like manner.

The materials and mechanical construction of our overshot assure performance under any any condition.

Repeat orders from foreign fields and wildcat jobs are convincing of "dependence."

When there are thousands of miles between operator and supply, he must have tools he can depend on.

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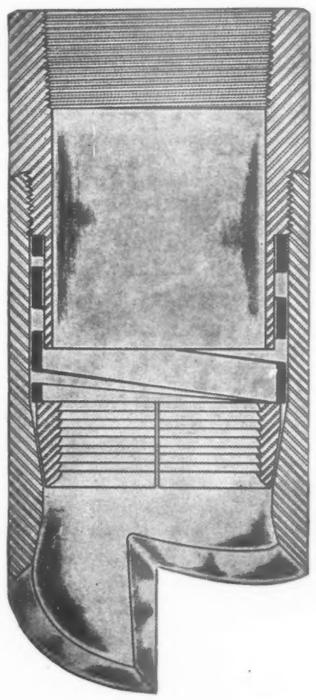

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Acme Sucker Rods pay big dividends

JONES SUCKER RODS are the nearest approach to 100% perfection of any Rod made—they have no equals.

Sucker Rods today must stand enormous strains—must stand pulls and jerks and turns—only an exceptional rod will stand up under this service.

JONES RODS are scientifically made—they have no weak spots—no flaws—pipes, or imperfect wrench heads—from the rolling mill—through every process until they are placed in the cars as finished rods, they are carefully watched—the steel is to our own analysis—every length is tested in our laboratories for uniformity of structure and for hidden flaws.

JONES engineers know Sucker Rods—have spent a lifetime in making them the BEST—we invite competitive laboratory tests and will cooperate with any user undertaking these tests.

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JONES ACME Steel SUCKER RODS

IDECO Steel Walking Beam—Solid I-Beam Type

IDECO Steel Walking Beam—Plate Box Girder Type

International

IDECO

Steel Walking Beams

Permanent — Dependable — 100% Service

IDECO Steel Walking Beams are permanent equipment. They should outlast the well. Experience has proved to many of the largest operators that IDECO Steel Equipment is the best insurance possible against costly break-downs and delays.

The best oil field practice is built into all three types of IDECO Steel Walking Beams. Temper screw end has wide slot to take all makes of temper screws. Temper screw counter weight pulley is also provided as standard equipment with all types of IDECO beams. A hard wood block thoroughly protects cable from abrasive wear.

An engineered product, assembled with great attention to small detail (designed by competent engineers to meet specific oil field conditions) International IDECO Walking Beams do their work, whatever the requirements may be, with ease and efficiency.

There can be no question about the wise economy of IDECO STEEL WALKING BEAMS in view of the experience of a number of the largest producing companies who have used this equipment under the hardest service conditions. The practical oil man sees at once that the stresses developed by months of continuous drilling service represents tremendous punishment for the beam that is handling a string of tools and cable weighing four or five tons. Only the highest type of material, design and workmanship such as is combined in IDECO STEEL WALKING BEAMS could deliver the continuous maximum service required in the Oil-Country.

Complete specifications on request.

Your Best Protection Against Avoidable Delays

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The Largest Company Devoted Exclusively to the Manufacture of Steel (Galvanized) Equipment for the Oil, Gas and Artesian Industries

IDECO Steel Walking Beam—Lattice Box Girder Type

Announcement

Effective March 1st, 1924, we became distributors of FRANKLIN VALVELESS GAS ENGINES. At this time we have a stock of 25, 30 and 40 H.P. Engines and Parts at Bristow and Tulsa, Oklahoma, and Eureka, Kansas. This is the only Gas Engine in the field requiring few repair parts and also has a big saving on lubricating oil. Call us for Prices, and let us mail you a Bulletin fully explaining the merits of this Engine.

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Stores in All Prominent Oil Fields

"Everything for the Oil Fields"

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Branch stores in 23 of the leading oil field towns in Oklahoma, Kansas, Wyoming, Colorado and Texas

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Paid for themselves in 7 months! That is the record of two Wiggins Floating Roofs installed 16 months ago

Think of it!

Completely paid for in seven months by evaporation savings!

The facts about the savings accomplished by two Wiggins Floating Roofs installed on rundown tanks 16 months ago at Cushing, Oklahoma, are convincing to anyone who takes the trouble to think what they mean.

Each tank was filled 400 times during the first year of operation.

The savings due to evaporation, established by actual test, are in excess of one barrel per filling.

The total annual saving for the two roofs is (2x400x1x42) 33,600 gallons of high-gravity straight-run gasoline, worth, at only ten cents a gallon, $3,360.

These roofs are not as efficient as the present design, but even so, they paid for themselves in seven months.

But think what the refiner has received in addition to this complete amortisement of his investment! He has a plant which is saving him this year, when gasoline is worth 20 cents, six or seven thousand dollars. He has stopped a small part of the annual economic loss of 200 millions of dollars suffered by this country from evaporation.

He has had complete fire protection for these two tanks for 16 months without a cent of cost —for the evaporation savings have paid for the protection. This protection will go on year after year with no expense.

The fire protective features of the Wiggins Floating Roof are of great importance. The roof blankets the oil. That stops evaporation. Then, because there is no evaporation, there is no inflammable vapor present and consequently no fire hazard. Remember, gasoline has been actually burned on top of a Wiggins Roof without igniting the gasoline on which the roof was floating at the time.

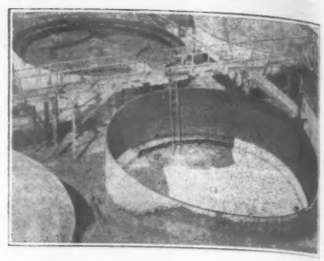
There are still other advantages. No expensive vents to buy. No screens to inspect, clean and replace. No sucking in of tanks. No vent valves to stick. No exposure of the entire tank to fire and evaporation because someone left a manhole open. No fire protection system necessary.

Your company should be installing Wiggins Roofs on its tanks right now, starting on your run-down tanks, your pipe line gathering and main line tanks, your crude working refinery tanks and your temporary gasoline storage and extending the improvements to permanent gasoline and crude storage.

This is the time to act—for every day the oil industry is losing more than half a million dollars in evaporation loss—and your company is paying part of the loss.

Recent purchasers include the Buckeye Pipe Line Company, the Atlantic Refining Company and the United States Navy. These people are acting upon sound advice when they buy Wiggins Floating Roofs. They know it will be an investment which will pay unusual dividends.

Write us today—or wire—giving us the diameters and locations of your tanks. We will give you complete quotations without obligating you.



Questions & Answers on the Wiggins Floating Roof

How is the space between rim of float and shell of tank sealed?

This seal is a very ingenious device, a vertical plate, called the shoe, fits against the tank shell. It is supported by a hanger pivoted on the float rim. The space between shoe and float rim is closed by a plate and asbestos connection. This device reduces the space open to the air to almost nothing.

Is the shoe close enough to the shell to prevent free evaporation?

The shoe fits tightly against the tank shell in parallel contact. Practically the only space is at the vertical seams, where the rivet heads make a slight air space.

Is there no evaporation space whatever?

There is a maximum open space in a 55,000-barrel tank of only 15 square feet.

Would not this cause some evaporation?

Practically none. The open space in a 55 with ordinary roof is more than 10,000 square feet. This is more than ordinarily maintained by the seal.

Yes, but if the ordinary roof is gastight would not that prevent evaporation?

No. Air is sucked in and expelled by breathing and filling and the expelled air takes much valuable gasoline vapor with it.

How much?

This question is too broad to be answered here, but, for example, a 55 handling 10,000 barrels of crude oil a day will waste $10,000 worth of gasoline in a year.

Admitting this loss in handling tanks, isn't it a fact that on standing storage there is very little evaporation?

Absolutely no. In one year the evaporation from motor fuel in a 55,000-barrel tank with a fixed roof will be from 750 to 3,500 barrels, depending on the type of roof. This will be reduced to approximately 250 or 300 barrels if a Wiggins Floating Roof is used.

What are the figures for light crude testing from 37° to 40° Be.?

The loss is from 400 to 1,500 barrels a year with fixed roof but only 100 barrels with a Wiggins Floating Roof.

Is there any difficulty in taking care of rain?

None whatever. The rain control and rain drainage systems are built to keep water off the roof.

How is the tank braced against wind load?

A girder placed around the top of the tank shell. This provides ample resistance against the wind.

CHICAGO BRIDGE & IRON WORKS

CHICAGO	NEW YORK	DALLAS	ATLANTA	SAN FRANCISCO
2128 Old Colony Building	3147 Hudson Terminal	1641 Praetorian Building	1054 Healey Building	1054 Rialto Building

Keeps oil in—Keeps fire out

The Wiggins Floating Roof is a Horton Product, Built by Chicago Bridge & Iron Works

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